FORESTRY ENGINEERING GROUP

UKFPA
UK Forest Products Association

Charity No. IAgrE Charity number 257303

Forestry Engineering Group
Annual Symposium
Thursday 6th September 2018
Newton Rigg Campus, Penrith.

'Engineering Forest Access for All'

For further information please contact:
Institution of Agricultural Engineers, The Bullock Building, University Way
Cranfield Bedford MK43 0GH

Email:secretary@iagre.org

INSTITUTION OF AGRICULTURAL ENGINEERS

AGRICULTURE HORTICULTURE FORESTRY ENVIRONMENT AMENITY

Charity No. IAgrE Charity number 257303

FEG SYMPOSIUM 2018 - Evaluation Form

We hope you enjoyed the Symposium today and found it useful. *Could you please fill out the attendance and evaluation form below,* ***sign it and hand it back to the organiser on your way out***

The information on this form will be used to create summary feedback results but no comment will be attributed to any individual. Names, organisation and email addresses may be circulated to other participants as a list of attendees for networking opportunities.

Your Name, address and e-mail address	

If you are attending on behalf of a business, please confirm name of the Business	

Event name	**Engineering Access for All** **FEG Symposium 2018**	Date	**6th September 2018**
When did you last attend an FEG Symposium?			

Please circle as many of these as applies to you	Forestry Commission	Voluntary Sector	Student	Self Employed
	Forestry Private Sector	Local Authority	Other Specify:	

How did you find out about this event?

O colleagues / work circulation O FEG Web events O e-mail invitation O other (please specify)

.....

Objectives

Did the symposium meet your expectations? Did it satisfy your requirements?

O poor O below average O average O above average O excellent

Further comments: .....

Presentation

Please comment on the quality, relevance, expertise in general

O poor O below average O average O above average O excellent

Further comments: .....

Facilities (venue/equipment/handouts/accessibility)

Please comment on the suitability of the venue and training material.

O poor O below average O average O above average O excellent

Further comments: .....

What is your reason for attending the Symposium?

……

……

What did you particularly like about the Symposium?

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……

……

What could have been done better?

……

……

What have you gained from being at this Symposium? (Knowledge, Network etc)

……

……

Other Comments, including suggestions for future events you would like Forestry Engineering Group to deliver :

……

……

Signature: ……

MANY THANKS FOR YOUR SUPPORT

Institution of Agricultural Engineers

Landwards Conference 2018

ENGINEERING COLLABORATION FOR SUCCESS:

BEST PRACTICE FOR KNOWLEDGE EXCHANGE IN AGRICULTURAL ENGINEERING

Tuesday 6 November 2018

Royal Academy of Engineering,
Prince Philip House,
3 Carlton House Terrace,
London SW1Y 5DG

Collaboration!

How can collaboration in engineering work?

What does success look like?

What can go wrong and how can we avoid the pitfalls?

This conference will explore successful collaborations in engineering between commercial, industrial, research and academic partners. Senior engineers with experience of successful knowledge exchange will share their expertise.

The conference is for everyone interested in bringing new technologies and innovative know-how into the agricultural supply chain.

Key benefits of attending

- Gain an oversight of technological development
- Focus on the challenges of knowledge exchange
- Learn about cutting edge insights into knowledge exchange
- Find out what you need for a successful collaboration
- Participate in elevator pitches
- Meet like-minded people
- Develop ideas and initiate new approaches

When, where, how much, where to book?

When:
Tuesday 6 November 2018

Where:
Royal Academy of Engineering, London

Cost:
Member Delegate Rate £100 + vat,
Member Retired Rate £75 + vat,
Student Member Rate £40 + vat,
Non-Member Delegate Rate £150 + vat,
Non Member Retired Rate £100 + vat

Booking:
www.iagre.org/IAgrEConference2018

Engineering Forest Access for All

Programme

Thursday 6th September 2018

Newton Rigg Campus, Penrith

0930 – 1600hrs

Morning - **Chair, Malcolm Cattermole, Forestry Commission**

9:30 – 9:45 **Opening Address – Malcolm Cattermole FEG Chairman**

9:45 – 10:30 **Keynote Speaker – David Henderson-Howat – Consultant**

The benefits and challenges of promoting public access in working forests. Access rights and associated responsibilities. How the engineer can help develop and deliver solutions to the problems that can arise.

10:30 – 11:00 **Paul Mudway** – Engineering New Infrastructure whilst balancing Public Access, Heritage and Conservation. A Consultant's perspective while working with the National Trust.

Break

11:15 – 11:45 **Chris Cairns - McGowan Ltd**

The Contractor's view on the building new access tracks for walkers, cyclists and horse riders in the forest: the machinery and equipment involved; how best to organise the work on site; working safely around other forest users.

11:45 – 12:15 **Tom Wallace – The Mountains and the People**

Working with Volunteers. Providing training and keeping them safe while constructing and repairing infrastructure.

12:15 – 12:30 **Questions**

Lunch – Speakers Photograph

Afternoon – Chair (TBC)

13:30 – 14:00 John Ireland - Visitor Safety Access Group

The risks and conflicts that can occur when opening up forests to greater and greater public access, and how best to manage and mitigate this. Also a look at some of the legislation involved too.

14:00 – 14:30 John Ogilvie – Head of Planning – Dumfries & Borders FD

A case study on the creation of a new timber access haul route at Nether Horsburgh in the Scottish Borders, focusing on the steps involved in planning this new work, the environmental aspects/issues and dealing with all the regulatory agencies.

Break

14:45 – 15.15 2 Case Studies - Engineered Assets and Public Access

Kirsty Adams – Tilhill Forestry

John Everitt – Chatsworth House Estate

1. What benefits do you get from encouraging public access in to your forests?

2. What engineering do you carry out within your forests to facilitate public access, and how do you justify the associated costs?

3. How do you manage the lifecycle of those assets?

15:45 – 16:00 Questions, Summary – Dr Geoff Freedman, Past President IAgrE

Close – Tea and Coffee will be available for networking opportunities

The Cost including lunch and coffee etc. will be £120.00. Student and Retired Members Rate is £30 all rates shown are VAT inclusive. For bookings and further information contact - bruce.hamilton@forestry.gsi.gov.uk

The Institute of Chartered Foresters (ICF) and the UK Forest Products Association (UKFPA) are lending support to the symposium. They have endorsed the event and are promoting it to their members. 6 CPD hours will be awarded. Charity No. IAgrE Charity number 257303

BOOKING FORM

Attendance includes presentations, backed up with notes or papers.
Morning and afternoon coffee and an excellent lunch.

You can now book on line via the IAgrE website:

https://iagre.org/events/FEG2018

If you have difficulty in making your payment online please phone the IAgrE Secretariat who will be happy to process your details Tel: 01234 750876

If you wish to pay by cheque please complete this form and send it with your payment to:

Bruce Hamilton MIAgrE, MIQ,MICE
Secretary
Forestry Engineering Specialist Group
Weavers Court
Forest Mill
Selkirk
TD7 5NY
Telephone: 03000 676436
Mobile: 07900 607785
bruce.hamilton@forestry.gsi.gov.uk

Please make your cheque payable to IAgrE

Delegate £100 + vat (£120) Student £25 + vat (£30)

Names of delegate(s):

Organisation:

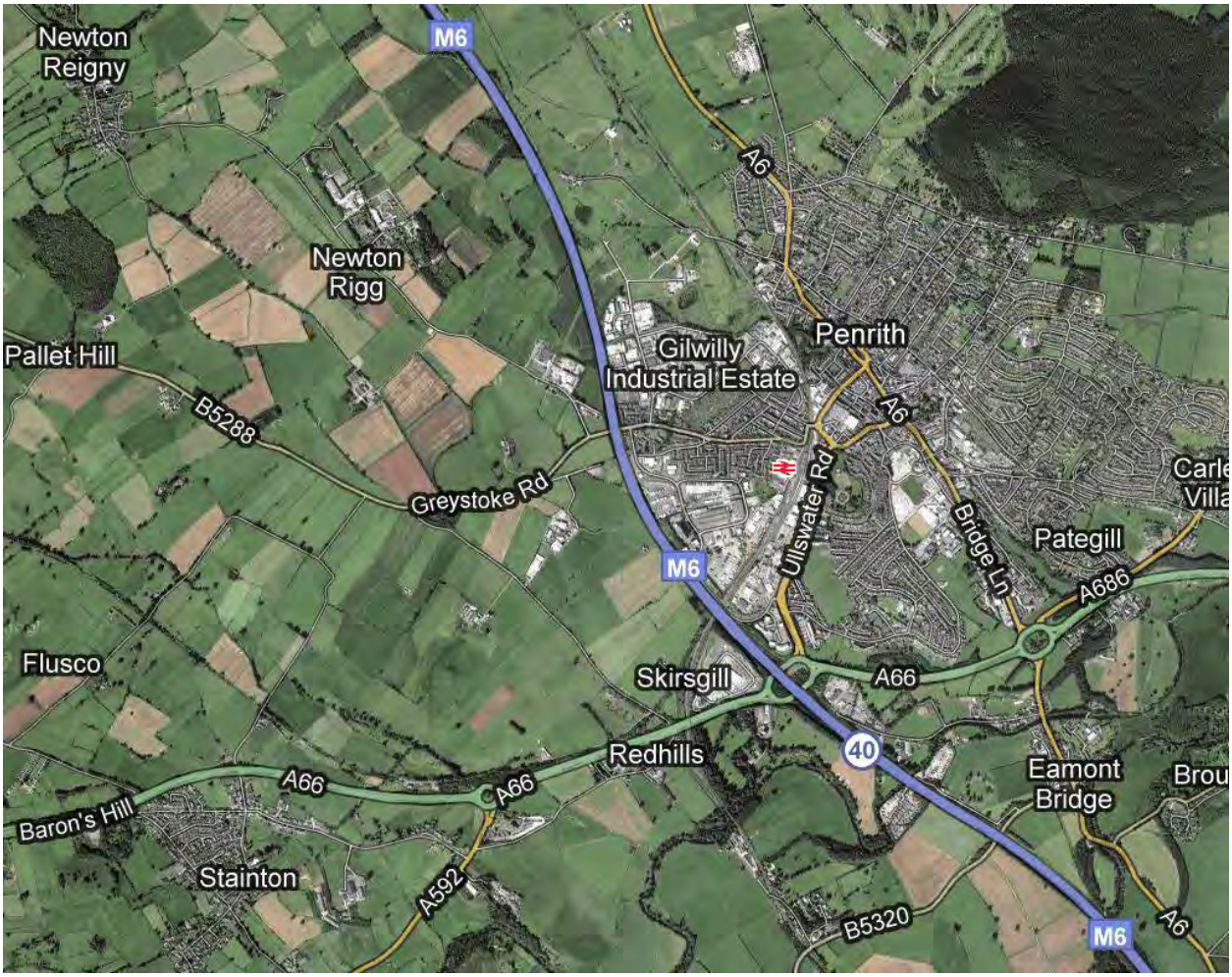
Address:

Postcode:

Tel:

Email:

Note: Under the new GDPR your information will be used for the delegates list of attendees which we will hold until the next Symposium so as we can contact you with information about it. If you do not want to be contacted about any future events please tick here. ☐



[Main parking between buildings N, T and 16.]

[Parking behind library]

[Penrith Railway Station]

[M6 J40 Northbound] - [get directions to the campus]

[M6 J40 Southbound] - [get directions to the campus]

The benefits and challenges of promoting public access in working forests.

David Henderson-Howat – outline of presentation

- For some people forests are places for fun and enjoyment. For others they are work places. Public access brings important benefits for lots of people such as improved health and well-being; it also brings significant economic benefits.

- The challenge of preventing accidents caused by public access in working forests is increasing as harvesting programmes grow, machines get bigger, and there are more visitors throughout the forest.

- As well as a moral obligation to prevent accidents, owners, occupiers and managers also have legal duties. SNH have recently updated *A brief guide to occupiers' legal liabilities in Scotland in relation to public outdoor access*[1]. Forestry Commission Practice Notes provide guidance on managing forest operations and woodland access[2].

- Different visitors have different levels of knowledge and different attitudes to risk. There is a continual need to repeat messages about potential dangers - without frightening visitors away. Communication channels include signs, Visitor Centres, websites, social media, phone alerts and specialist magazines. Signs need careful thought and active management.

- Generally, in England & Wales there is public access to most land managed by the Forestry Commission, Natural Resources Wales, the National Trust and the Woodland Trust, as well as other "access land" created under the Countryside and Rights of Way Act 2000. In addition, there are public and permissive rights of way. The *Countryside Code* outlines the responsibilities of both visitors and land managers[3].

- In Scotland, there is a responsible right of access, created by the Land Reform (Scotland) Act 2003. Details, including what is meant by "responsible" behaviour, are set out in the Scottish Outdoor Access Code[4]. This Code includes guidance relating to forests and woods with ongoing forest operations.

- Engineers have an important role, both in enhancing the visitor experience and in reducing the risk of accidents. Examples include the design, construction and management of car parks, bridges, viewing platforms and trails[5], as well as the development of specifications and standards[6]. But, to reduce the risk of accidents, there is also a continuing need to influence public behaviour.

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[1] See https://www.outdooraccess-scotland.scot/sites/soac/files//docs/occupiers_liability_4_jan_2018_a2486085_a2601522_0.pdf

[2] See for example https://scotland.forestry.gov.uk/supporting/forest-industries/managing-woodland-access.

[3] See https://www.gov.uk/government/publications/the-countryside-code

[4] See https://www.nature.scot/sites/default/files/2018-05/Publication%202005%20-%20Scottish%20Outdoor%20Access%20Code.pdf

[5] See, for example, Paths for All/SNH *Outdoor Access Design Guide* at file:///C:/Users/user/Downloads/OADG_PathsforAll_Web%20(3).pdf

[6] See, for example, Forestry Commission operational guidance on cycle trail management at http://vscg.org/documents/uploads/OGB_37_CYCLE_TRAIL_MANAGMENT_VERSION_20_NOVEMBER_20_2012.pdf.

Engineering Forest Access for All

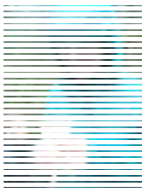
The benefits and challenges of promoting public access in working forests

David Henderson-Howat

*FORESTS: PLACES FOR FUN **AND** WORK PLACES*

A NEED TO PREVENT CAR CRASHES!

A HAPPIER STORY…



BENEFITS OF PUBLIC ACCESS

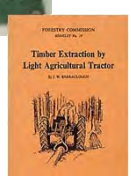
Chief Medical Officer:

*If a medication existed which had a similar effect to **physical activity**, it would be regarded as a "wonder drug" or a "miracle cure"*

Each year over **20 million people** enjoy visits to England's Public Forest Estate (226 million visits/year)

Forest recreation worth ***£183 million/year*** to the Scottish economy (timber = £771 million/year)

LONG HISTORY OF PUBLIC ACCESS TO WORKING FORESTS



BUT INCREASED CHALLENGE AS …

- Harvesting programmes have increased
- Machines are bigger
- More people, with easier access
- ? increased risk taking by visitors
  - ➢ Moral responsibility to prevent accidents
  - ➢ Legal liabilities

PUBLIC UNDERSTANDING OF THE RISKS?

People may enjoy a sense of freedom and adventure in forests - but do they know they are also work-places?

- Different levels of knowledge
- Different attitudes to risk

➢Continual need to repeat messages about potential dangers - without frightening visitors away

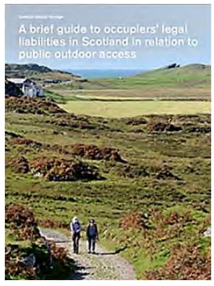
➢Range of communication channels - e.g. signs, Visitor Centres, websites, specialist magazines, social media, phone alerts etc.

THE COMMUNICATIONS CHALLENGE

E.g. Signs need careful thought and active management…

LIABILITIES

- Civil duty of care – Occupiers Liability legislation and case law
- Statutory duties under Health and Safety at Work legislation
  - need to control risks that affect the health and safety of the public on forest sites
  - identify reasonable practicable controls



ACCESS RIGHTS - AN EXTREME CASE IN MIDDLE ENGLAND!

Over 250 hectares of woodland

One public path

All other access requires a permit from the estate

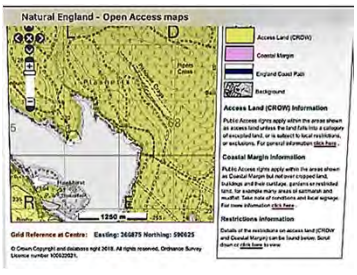
GENERALLY IN ENGLAND & WALES

Access to:

- most FC/NRW, National Trust and Woodland Trust land
- other access land created under the CRoW Act 2000
- public rights of way, permissive footpaths and bridleways etc

- OS maps show "Access land" *as a guide* but advise reference to Natural England/NRW websites for details of restrictions.

NOT ALWAYS SO EASY IN PRACTICE!



RESPONSIBLE ACCESS (E&W)

Countryside Code:

Respect other people/Protect the natural environment/Enjoy the outdoors

- Advice for land managers
  … encourage people to respect your wishes by giving clear, polite guidance where it's needed
  … telling visitors about your land management work helps them to avoid getting in your way
- Advice for visitors
  … get the latest information about where and when you can go
  … your rights to go onto some areas may be restricted in particular places at particular times

SCOTLAND'S RESPONSIBLE RIGHT OF ACCESS

People have a right to be on land for recreational etc purposes
- ➢ however, this ***right must be exercised responsibly***, as set out in the Scottish Outdoor Access Code.

- Excluded land: buildings/curtilage; private gardens; school grounds; land with crops; places that traditionally charge for entry; construction sites; quarries; airports; railways; golf courses etc.
- Excluded activities: hunting, shooting and fishing; taking anything away for commercial purposes; motorised vehicles etc.

SCOTTISH OUTDOOR ACCESS CODE

Spells out what is meant by:

- Responsible behaviour by the public
- Responsible behaviour by land managers

  ➢ The Code includes guidance relating to *Forests and Woods with Ongoing Forest Operations*

- Communicating information about is meant by "responsible" behaviour is a continual challenge …

SCOTTISH OUTDOOR ACCESS CODE: FOREST OPERATIONS

Responsible behaviour by land managers

➢ Follow good practice, as set out in industry-approved guidance…

➢ Keep the area affected, and the duration to the minimum required. Tell people about these at the main access points and, if possible, provide alternative routes…

➢ If possible, concentrate felling and extraction at times when public use is likely to be lowest. Allow people to use … routes when work has ended … and would not cause significant safety hazards…

➢ Ensure that all site operators and vehicle drivers are aware that people might be present

SCOTTISH OUTDOOR ACCESS CODE: FOREST OPERATIONS

Responsible behaviour by the public:

➢ Read warning signs … and follow precautions…

➢ If you come across machinery, keep a safe distance…

➢ Take extra care on forest tracks as … heavy timber lorries might be using forest tracks…

➢ Do not climb on to timber stacks and keep childrer away from them.

THE ROLE OF THE ENGINEER

- Enhancing the visitor experience
- Reducing the risk of accidents
- But it's not just about engineering …

ENHANCING THE VISITOR EXPERIENCE

Car parks
Bridges
Multi-use gates
Viewing platforms

REDUCING THE RISK OF ACCIDENTS

- Expertise in design, construction and management
- Development of specifications and standards

BUT IT'S NOT *JUST* ABOUT ENGINEERING …

Road traffic fatalities in Britain

- ❑ 1930 - 7,305
- ❑ 2016 - 1,792

- ➢ Much better engineering: roads and vehicles
- ➢ *But* also other factors such as behavioural change

Countryside Access

CONSTRAINTS AND MITIGATION

Most major countryside bodies have strategies in place to increase recreational activity on their Estate. The significant escalation in outdoor activity during the past 10 years has been substantially driven by mountain biking but has diversified to include other 'family' based activity appropriate to all ages.

The core infrastructure to facilitate access can be defined broadly as roads, trails and car parks. Any development in the countryside requires rigorous planning and widespread consultation prior to construction and evidence indicates that the process is becoming increasingly likely to encounter opposition from other bodies and / or individuals (both internal and external) who have a different perspective. Concerns arising can broadly be defined under the following headings.

Past experience with the Forestry Commission and recent involvement with both the National Trust and Woodland Trust will be helpful in providing context to the content of the paper.

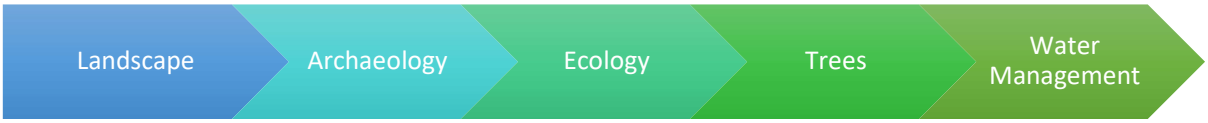


Fig 1

PLANNING

The installation of recreational infrastructure does not constitute 'Permitted' Development and as a result always requires a full planning consultation. There is no 'de minimus' defined in the legislation.

As part of the process the Planning Authority is legally required to consult statutory consultees who then have a duty to respond. The Authority will also approach specific non – statutory bodies where there is an alignment with organisational objectives. The general public becomes aware as a result of statutory notices posted on site or researching the Planning Portal.

Fig 2 - statutory and non - statutory consultees

Landscape

A major driver in creating multi – use trail networks on the National Trust Estate has been to introduce the public to the broader, historic landscapes of the individual properties and in so doing provide a more family - based experience.

All sites were sensitive and subject to Heritage Impact Assessment. Some were listed and three of the property landscapes designed by Lancelot 'Capability' Brown, revered Landscape Architect known as 'England's greatest gardener'

Both English Heritage and the Gardens Trust contributed to route selection at specific sites with the requirement being to locate the trail in such a way that impact on the most critical views was minimised or removed. In addition, the colour of construction aggregates in all cases needed to be appropriately indigenous to the location, potentially compromising engineering specification. This became particularly problematic at Blickling Hall where the planners insisted on the use of local Carstone an 'as dug' ungraded aggregate with very poor engineering characteristics.

Fig 3 - view of walled garden at Ickworth House and listed landscape behind. Original application was withdrawn because of landscape and arboricultural concerns and resubmitted on an entirely route

Fig 4 - Bridge at Croome Court - application was withdrawn permanently because of opposition from The Gardens Trust, Natural England and the RSPB

Archaeology

Fig 5 - 'Rigg and furrow' on route at Wallington Hall

The presence, or possible presence of historic artefacts or workings can instigate the requirement for an archaeological watching brief.

Ridge (rigg) and furrow present on the route at Wallington was constructed with an archaeologist present for the duration of the build within the affected section as the use of a 'no – dig' specification on crossfall was judged to be too invasive.

The additional cost of the watching brief was approx. £5K

Ecology

The following protected species were a significant influence on the progress and cost of 4 National Trust sites:

Barbastelle bats within SAC Woodland at Wimpole – serious delays and still under negotiation with Natural England and the Bat Preservation Society.

Great Crested Newts at Kingston Lacy – 100metres of boardwalk constructed to appease Natural England

Badgers at Ickworth – realignment of route which resulted in second arboricultural survey

Nightingales at Croome – unable to reach a satisfactory outcome with Natural England and RSPB. Planning withdrawn as a result

Fig 6- discovery of badger sett at Wimpole Hall resulted in rerouting o trail and 3 month delay

Fig 7 - presence of valuable nightingale at Croome Court resulted in withdrawal of scheme

Fig 8 - discovery of great crested newt DNA at Kingston Lacy resulted in major specification change at additional cost of £100K

Fig 9 - Barbastelle bat at Wimpole; Natural England opposition still delaying Planning Appoval over 1 year on from initial application

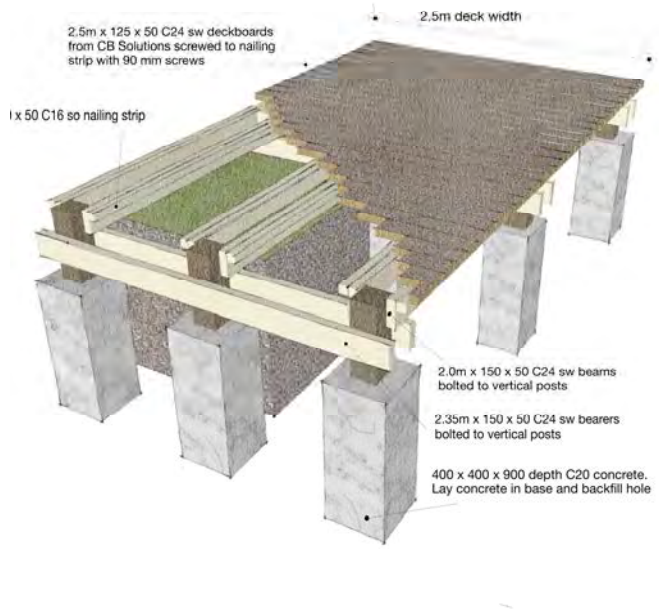


Fig 10 - boardwalk design at Kingston Lacy installed to appease Natural England concerns regarding newts

Fig 11 - Kingston Lacy, boardwalk subframe under construction

Trees

The Woodland Trust and the Ancient Tree Forum are not Statutory consultees but have been consistent in their opposition to any of the proposals when within Ancient Woodland or woodpasture[1].

A full arboricultural survey has been implemented in each case and has driven a reappraisal of specification with significant additional lengths identified as requiring BS5837 construction at an additional cost of approx. £80 / lin metre. Negotiation with the tree officer facilitated an alternative no dig specification incorporating a biaxial (2D) geogrid where trails were in the vicinity of less significant trees and generated a significant cost saving.

[1] Woodpasture – significant micro habitat created by the combination of veteran trees and grazing in a parkland environment

Fig 12 - incorporation of 3D geogrid to achieve BS 5837 compliance

Fig 13 - ongoing installation to BS 5837 at Kingston Lacy; note timber edge boards and heras fencing

Fig 14 - alien conifer plantation within Ancient semi natural woodland at Cadora Wood

Fig 15 - indigenous hardwoods within ancient woodland at Cadora Wood precluding access for PAWS restoration

The Woodland Trust are organisationally committed to restoring and safeguarding Britain's Ancient Woodlands. Implementation of that objective requires the development of appropriate forest road access to facilitate de-coniferisation, sustainable forest management and associated PAWS restoration.

However, having visited a number of inaccessible WT woodlands it is evident that there is an inherent conflict between operational requirements and published policy in that in order to provide the necessary access, significant numbers of veteran trees may have to be felled to accommodate road construction. BS5837 is an expensive but achievable option but can only practically be implemented on level ground where no excavation is required to create the formation.

Water Management

Conventional Car Park construction can generate significant additional run off into public highway drainage systems and / or rivers.

When consulted through the Planning process the Highway Authority and the Environment Agency will require an understanding of how surface water will be managed.

Current policy is to encourage the developer to retain run-off as close as possible to his site rather than as might have been the case historically, discharging directly into existing drainage systems or watercourses.

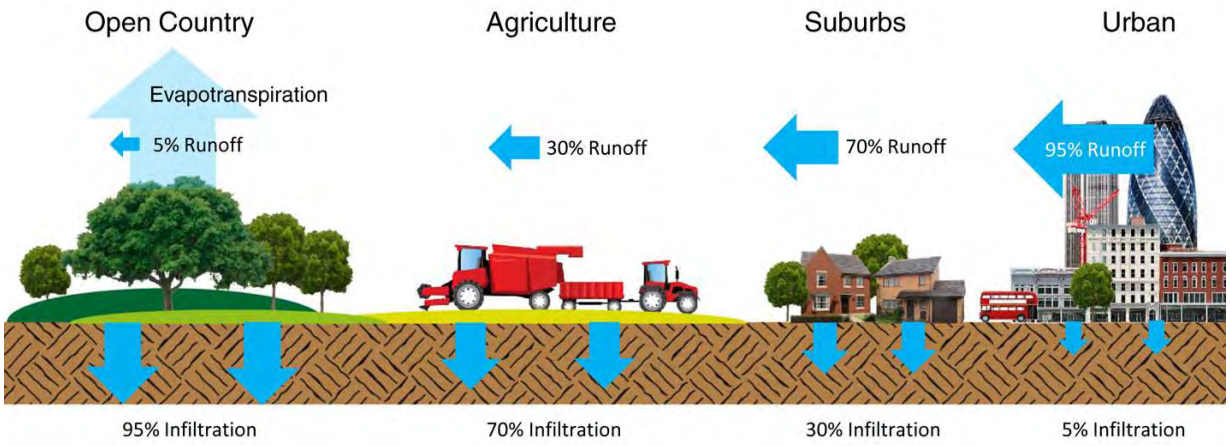


Fig 16- comparison of run off infiltration rates

Most countryside bodies are increasing their recreational profile and in so doing are looking to strike a balance between numbers of vehicles and aesthetic when commissioning new or improved car parks.

Embracing the principles of SUDS where appropriate has the potential to provide benefits to the environment more generally and to the developer in terms of amenity and increased biodiversity if sympathetically designed into the landscape.

Fig 17- simple stone car park with excessive deformation

Fig 18 - large urban car park with all run off into public storm drainage systems

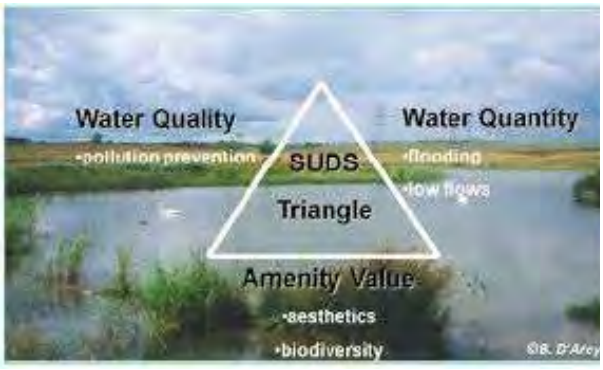
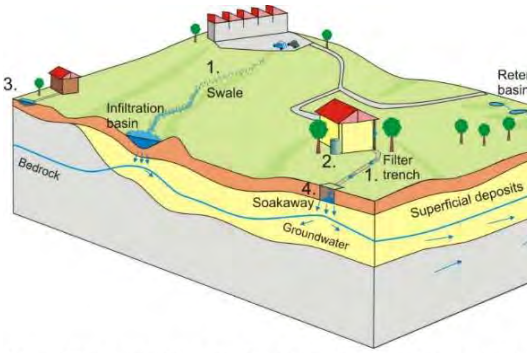


Fig 19 - demonstration of SUDS benefits

Fig 20 - permeable paviors with aggregate and grass infill

Fig 20 demonstrates car park construction using permeable materials stabilised with interlocking plastic paviors allowing direct infiltration to the subgrade and thereby minimising run-off. This type of construction does have a potentially negative implication when one considers that a significant amount of alien, non – biodegradable material is introduced into the countryside. Less invasive alternatives are illustrated below.



During a storm event, surface water flows through swales and filter trenches tha
polluants (1). The peak river discharge is delayed and reduced by; storage of w
storage in ponds (3), or infiltration of water to the ground through infiltration bas
(4). This process improves the quality of water in rivers and decreases peak rive

Fig 21- diagrammatic demonstration of SUDS principles

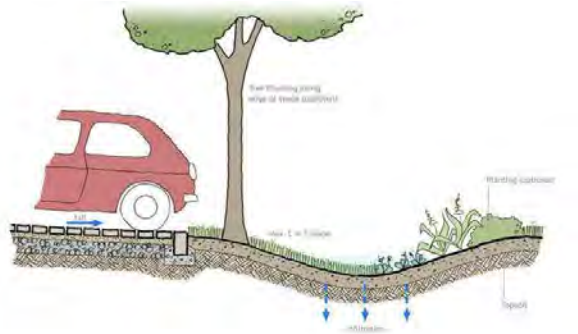


Fig 22 - swales to boundary of car park to facilitate slowing of run off and gradual infiltration

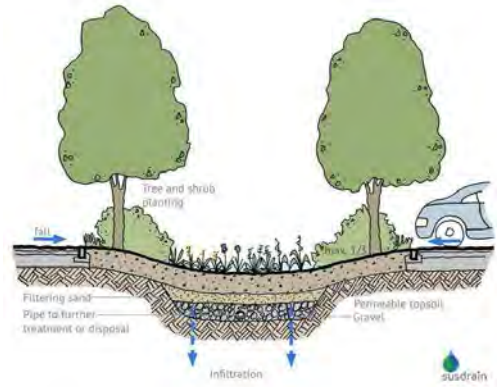


Fig 23 - improved swale with drainage medium to aid infiltration to subgrade

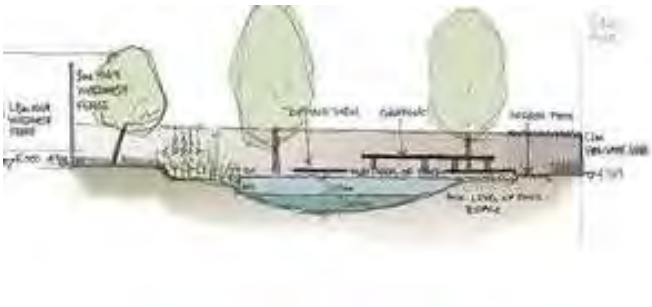


Fig 24 - attenuation pond adjacent to car park construction

Fig 25 - swale to perimeter of construction

Fig 26 - incorporation of attenuation pond at Jeskyns Farm

SUMMARY

Any development in the countryside has the potential to generate opposition from one or more consultees or a motivated individual with a particular affinity with a location.

Increasing protection of the environment, individual habitats and historic locations can result in seemingly innocuous projects becoming mired in an infinitely extended iteration of negotiation, amendment and resubmission within the planning process. Planners will not easily commit to a decision when there is risk of adverse publicity from a decision and so will either delay or default to a committee decision when there are outstanding contentious issues.

The challenge for the engineer is to appreciate the need to adapt, innovate and compromise with specification whilst still retaining structural integrity and achieving client and end user satisfaction.

Being able to establish productive dialogue at an early stage with all interested parties will be critical in achieving a successful outcome

Paul Mudway

prm

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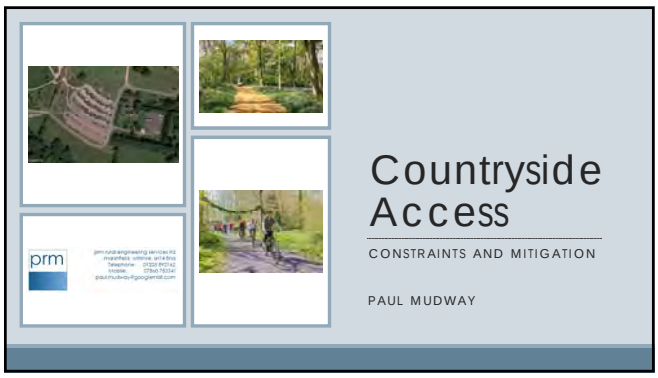
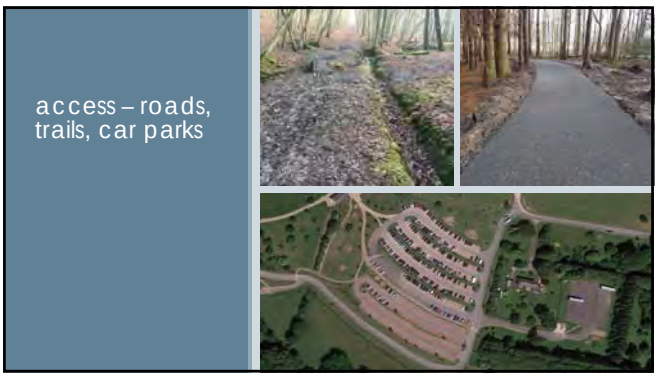
August 2018





planning

'PERMITTED DEVELOPMENT'

The *formation, alteration and maintenance of private ways (roads and tracks) for the purposes of forestry* are generally considered to be 'permitted development'. These operations are thus not normally subject to full consultation.

FULL PLANNING CONSULTATION

The construction or alteration of infrastructure for recreation or other forms of access (trails and car parks) are not deemed to be permitted development and are thus subject to full planning consultation

- Saltram, Devon
- Calke, Derbyshire
- Croome, Worcestershire – withdrawn
- Osterley, London
- Wimpole, Cambridgeshire – planning resubmitted
- Blickling, Norfolk
- Ickworth, Suffolk – planning resubmitted, achieved August 2018
- Nostell Priory, Yorkshire
- Wallington, Northumberland
- Kingston Lacy, Dorset
- Dudmaston - Worcestershire

National Trust

programme: 50km new multi – use trails in 2 year timescale

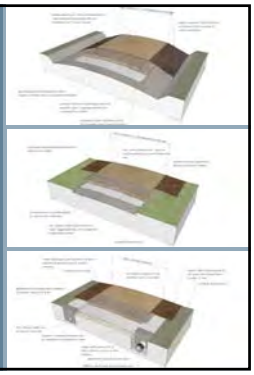
Sites

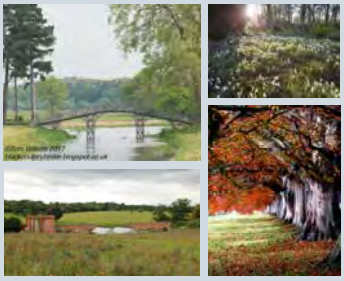
conventional specifications

Idealised specifications if not constrained by other influencing factors such as trees or archaeology

Approximate cost £50 / linear metre for 1 & 2

Specification 3 (with filter drainage) introduced for circumstances where conventional v – ditches seen as too visually invasive – but double the price



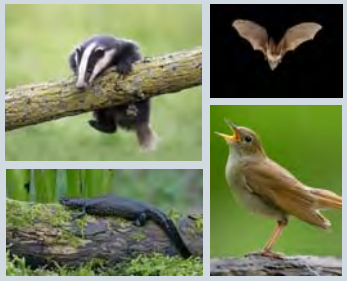


landscape

All National Trust landscapes highly sensitive

3 of the 10 sites designed by Capability Brown

Mitigation – planning of route to disguise construction in landscape and avoid visibility from specific locations

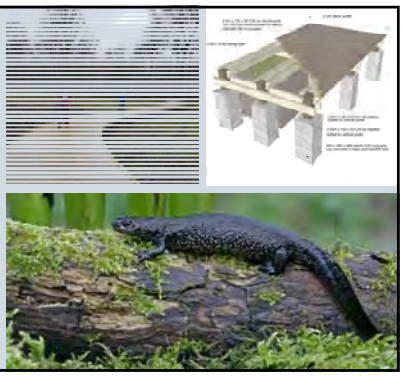


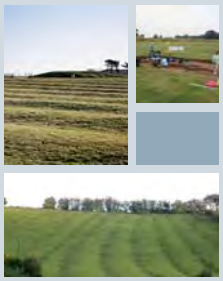
ecology

- european protected species and other significant habitats
- significant issues with planning process if found within vicinity

great crested newt – Kingston Lacy multi – use trail

- Great crested newt reported to be in vicinity of trail
- Survey instigated + £5K
- Dna discovered
- 100 metres of raised boardwalk constructed as mititigation action to satisfy planners + £95K





archaeology

- All National Trust sites constrained by archaeology
- Main concern 'ridge and furrow' or 'rigg and furrow'
- Implication – archaeological watching brief when in vicinity or no dig construction.
- No formation can be opened without archaeologist in attendance
- Cost implication approx. £15K




trees

- significant opposition on all sites from Woodland Trust and Ancient Tree Forum
- 'woodpasture' equally contentious
- Mitigation - incorporate 'no dig' specifications and in areas of greatest concern comply with requirements of BS5837 'trees and construction'




no - dig specifications

1. Full BS 5837 Specification

Applied within ASNW or wherever route adjacent to veteran or where construction within 15m radius root protection area (RPA) of veteran or significant trees

Incorporates 3 – dimensional geogrid

Cells backfilled with reduced fines aggregate to ensure movement of air and water around roots

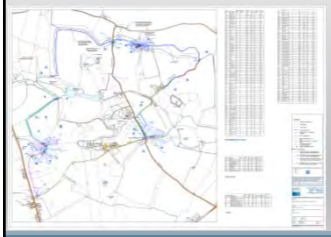
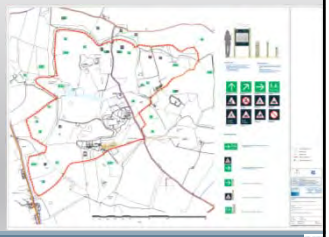
Cost implication + £70 / lin metre

2. Alternative in less contentious locations

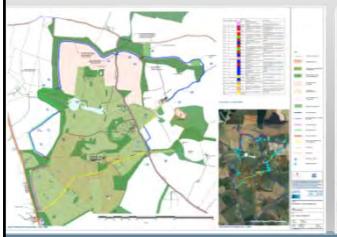
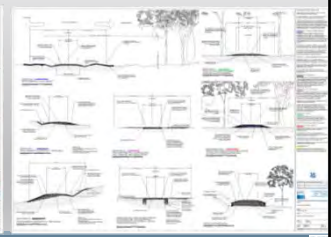
Biaxial (2 dimensional) geogrid

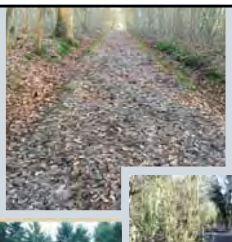
Cost neutral

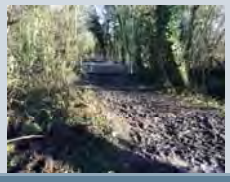
wimpole planning – trees and signage

wimpole planning - specification



Woodland Trust – management access

CONFLICT BETWEEN NEED TO MANAGE AND POLICY OF TREE RETENTION WITHIN ANCIENT WOODLANDS

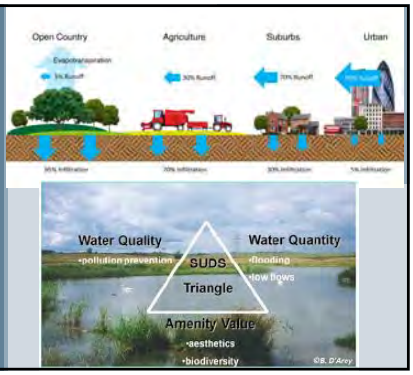
car parks

- Organisations such as National Trust, Woodland Trust and Forestry Commission all attracting increased visitor numbers
- Need to achieve balance between rural aesthetic and functionality
- Pressure from Drainage Authority through planning process to demonstrate that run off will not increase flooding potential
- Infiltration v Discharge or maybe a combination of the two

SUDS

Sustainable Urban Drainage Schemes

–'slowing the flow'



swales

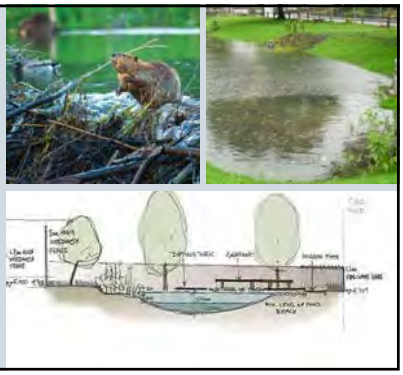
- swales are designed to slow and capture runoff by spreading it horizontally across the landscape (along an), facilitating runoff infiltration into the soil.
- infiltration potential can be increased by lining with drainage medium
- allowing vegetation to proliferate further attenuates run off and has the added benefit of providing biodiverse wetland habitat

attenuation ponds

Same principle as swales but greater capacity – delaying time to peak until storm conditions abate

Slow release of run - off

Aesthetic, amenity and ecological gain possible with good landscape design



attenuation storage - options

- Jeskyns Farm – attenuation pond incorporated within car park curtilage as no other means of assuring no run – off implication onto public highway
- High Lodge – 'polystorm' underground storage

permeable surfacing

- paviors filled with no fines aggregate or topsoil medium allow infiltration to the subgrade
- exposed plastic can be problematic as fill material settles
- grass fill deteriorates with anything other than overspill usage

lack of attenuation?

- removal of hedge boundaries
- compaction of soils by agricultural machinery
- lack of forest maintenance
- Landslip onto A38 and main line to Cornwall

bedgebury pinetum

2016

1999

2003

westonbirt arboretum

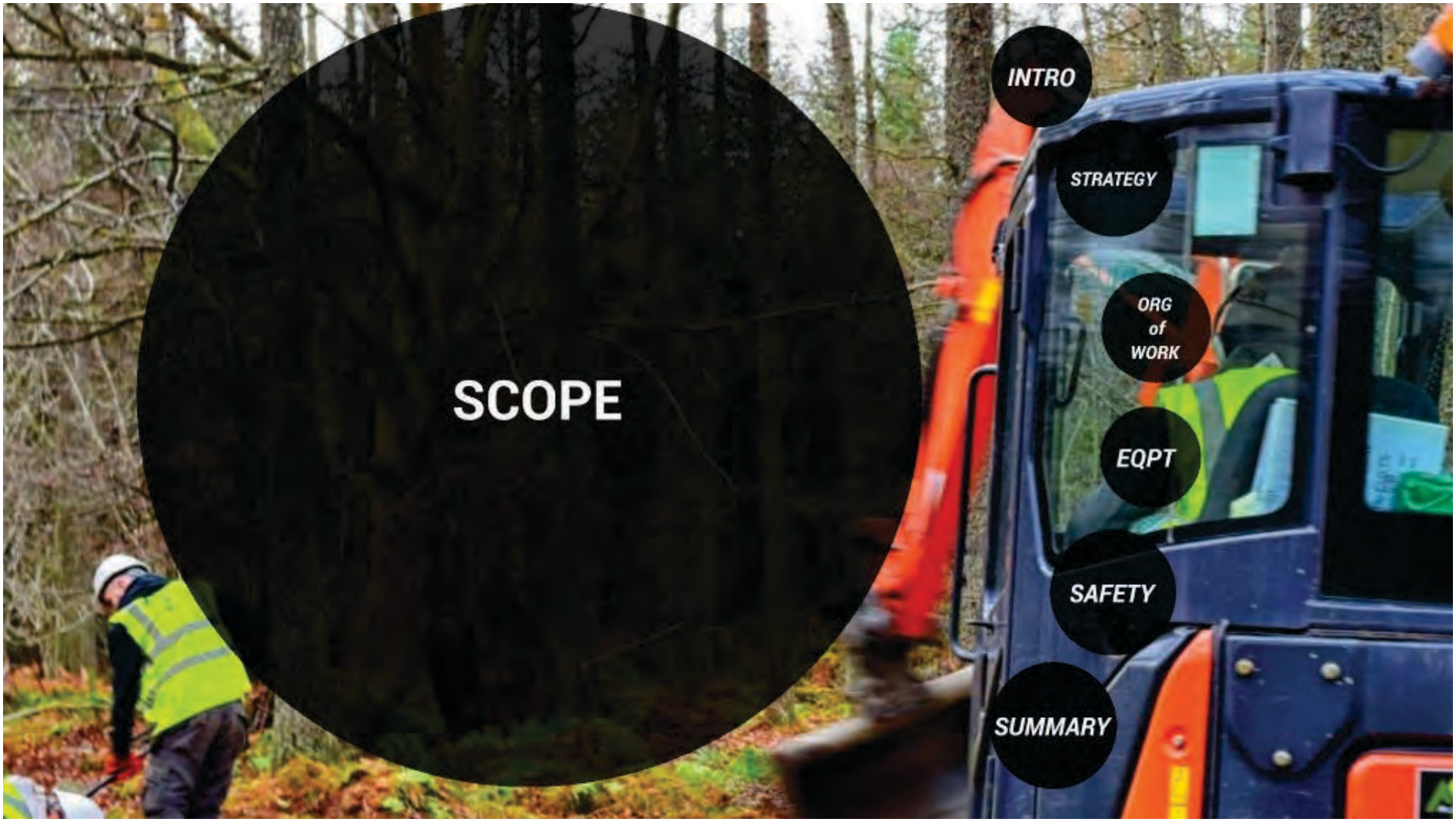
1999

2015

Chris Cairns – McGowan Ltd

“The Contractor’s view on the building new access tracks for walkers, cyclists and horse riders in the forest: the machinery and equipment involved; how best to organise the work on site; working safely around other forest users”.

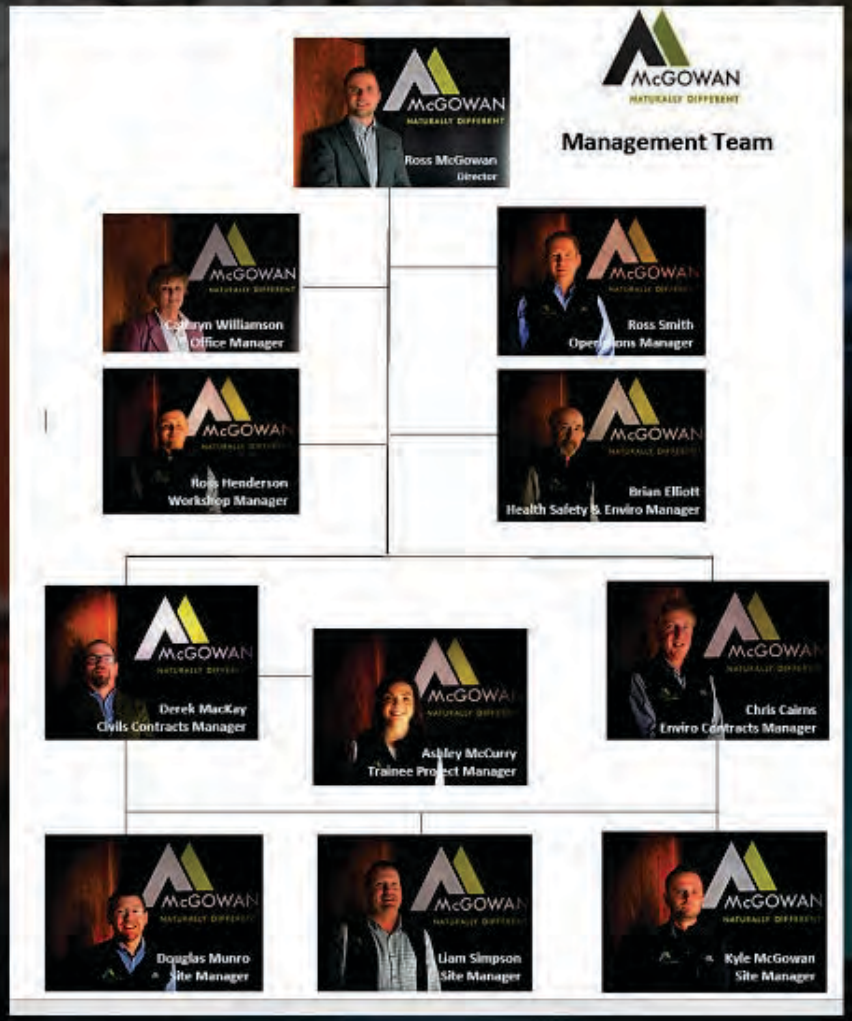

Contractors
View
06th Sept 18
02
HITACHI
McGOWAN
NATURALLY DIFFERENT


SCOPE
INTRO
STRATEGY
ORG
of
WORK
EQPT
SAFETY
SUMMARY


McGowan Ltd
Sensitive Approach
"Naturally Different"
Who
What
Where
How

Who

- Est 2009
- Based in Aviemore
- 50 Employees
- 11 Managers



What -

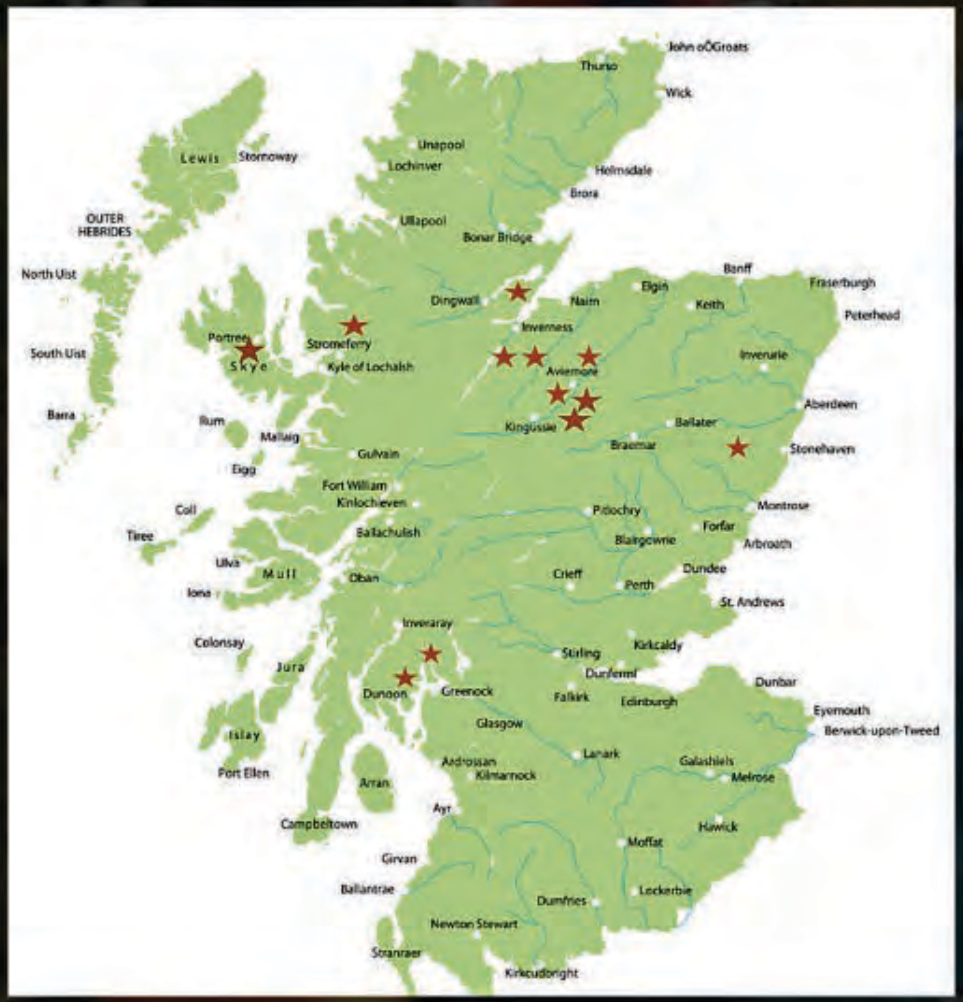
- *Cable & Pipe Laying*
- *Flood Prevention*
- *Bridges & Structures*
- *Renewable s*
- *Housing Infrastructure*

What -

- *Moorland Restoration*
- *Forestry & Estate Infrastructure*
- *Rural Paths*
- *Bespoke Stone*

Where -

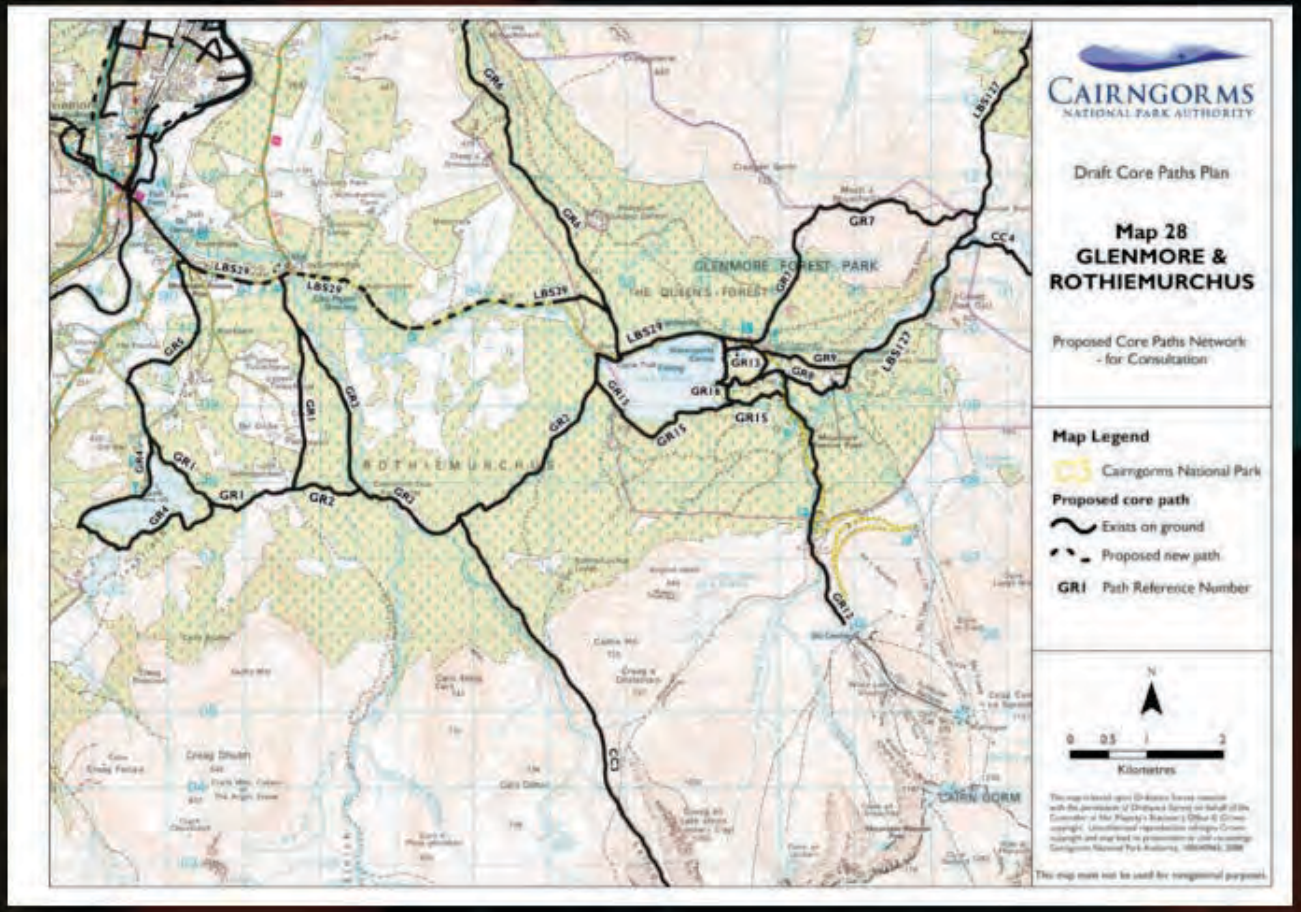
Live Projects




How - Industry Recognized Accreditation
UVDB Verify
empowered by Achilles
ACCREDITED
NERS
NATIONAL ELECTRICITY REGISTRATION SCHEME
THE BRITISH ASSESSMENT BUREAU
OHSAS18001
THE BRITISH ASSESSMENT BUREAU
ISO9001
THE BRITISH ASSESSMENT BUREAU
ISO14001


Strategy
Access
User Profile
Considerations
Consent

Access - Consideration of wider route network



User Profile - Design Requirements

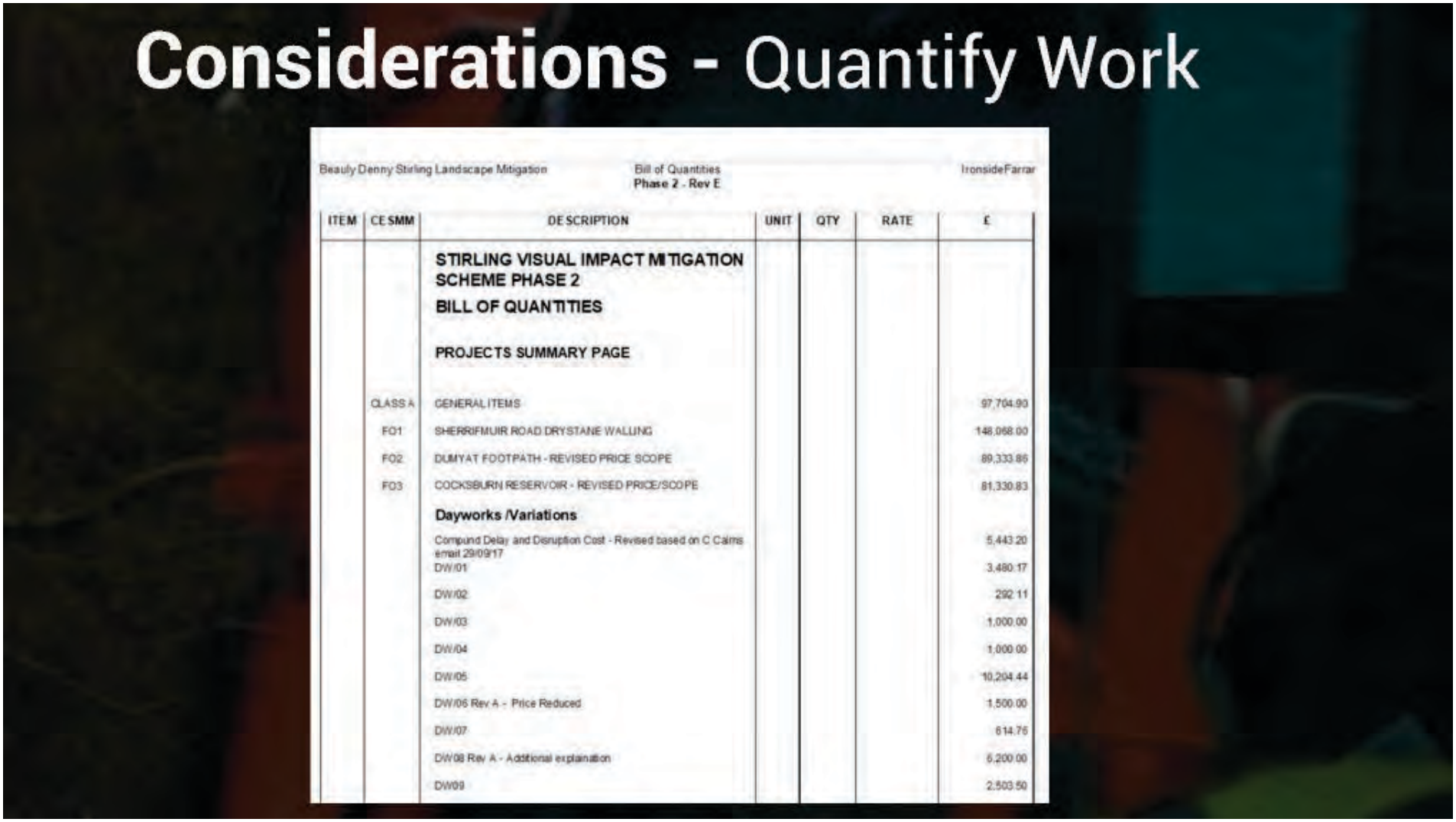
Considerations - Laydown Areas

Considerations - Site Access Constraints

Considerations - Machinery

Considerations - Material

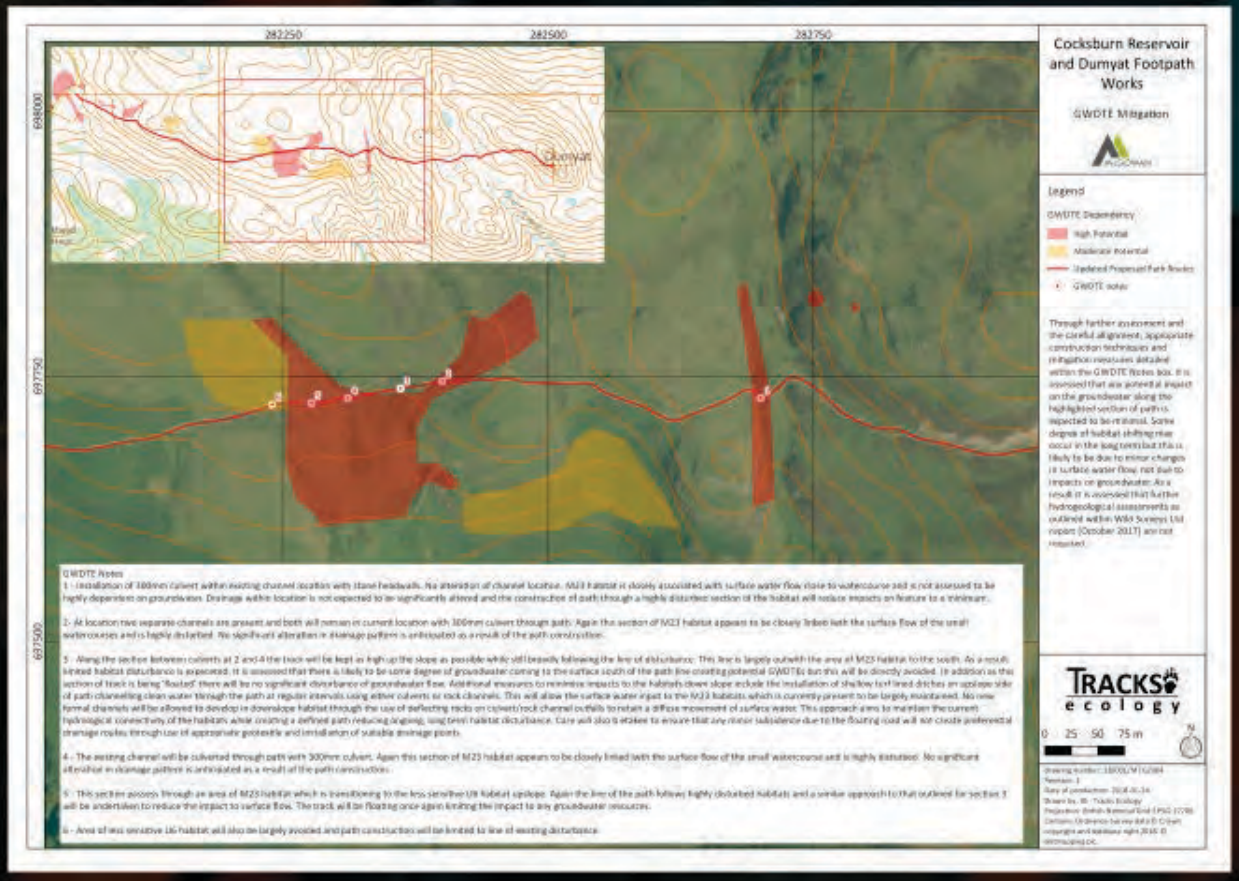
Considerations - Quantify Work



Beauly Denny Stirling Landscape Mitigation — Bill of Quantities Phase 2 - Rev E — IronsideFarrar

ITEM	CE SMM	DESCRIPTION	UNIT	QTY	RATE	£
		STIRLING VISUAL IMPACT MITIGATION SCHEME PHASE 2				
		BILL OF QUANTITIES				
		PROJECTS SUMMARY PAGE				
	CLASS A	GENERAL ITEMS				97,704.90
	FO1	SHERRIFMUIR ROAD DRYSTANE WALLING				148,068.00
	FO2	DUMYAT FOOTPATH - REVISED PRICE SCOPE				89,333.86
	FO3	COCKSBURN RESERVOIR - REVISED PRICE/SCOPE				81,330.83
		Dayworks /Variations				
		Compund Delay and Disruption Cost - Revised based on C Cairns email 29/09/17				5,443.20
		DW/01				3,480.17
		DW/02				292.11
		DW/03				1,000.00
		DW/04				1,000.00
		DW/05				10,204.44
		DW/06 Rev A - Price Reduced				1,500.00
		DW/07				614.75
		DW/08 Rev A - Additional explanation				6,200.00
		DW/09				2,503.50

Considerations - Environmental Designations



Considerations- Construction H&S Plan

Construction Phase Plan / Risk Assessment / Method Statement					
Project:	Clash Woods New Forest Road Construction				
Date:	01 May 2017				
Doc Ref:	FCS0029.01	**Prepared By:**	Brian Elliott (SHEQ Manager)	**Revision:**	01

Scope of Works:

FCS requires 500metres of new forest road constructed in order to access future harvesting sites within Clash Wood located approximately 1 mile north of Muir of Ord on the A832. Access to the proposed new site has specific hazards which need to be addressed and necessary mitigations implemented (Refer to FCS Site Map):

- New road-line travels under an Overhead Powerline. SSE have provided a GS6 Form with a Safe Working Height of 4.3metres, and a Safe Travelling Height of 4.8metres. The Client has a stock of goalpost kits located within the quarry for use, however Contractor responsibility for erecting and maintaining these at the correct heights throughout the works.
- The site is popular for local residents for recreation, with large parts of the road network within the block being classified as Highland Council Core Paths, including the majority of the haul route from the quarry to the start of the new road line.
- Site Access from the public roads is through a Forestry Commission public car park.
- The new road will cross over a watercourse (Chainage 75m). SEPA authorization has been granted to use a 900mm diameter culvert (12metres in length) on this watercourse, however a Private Water Supply is located downstream of this crossing point.

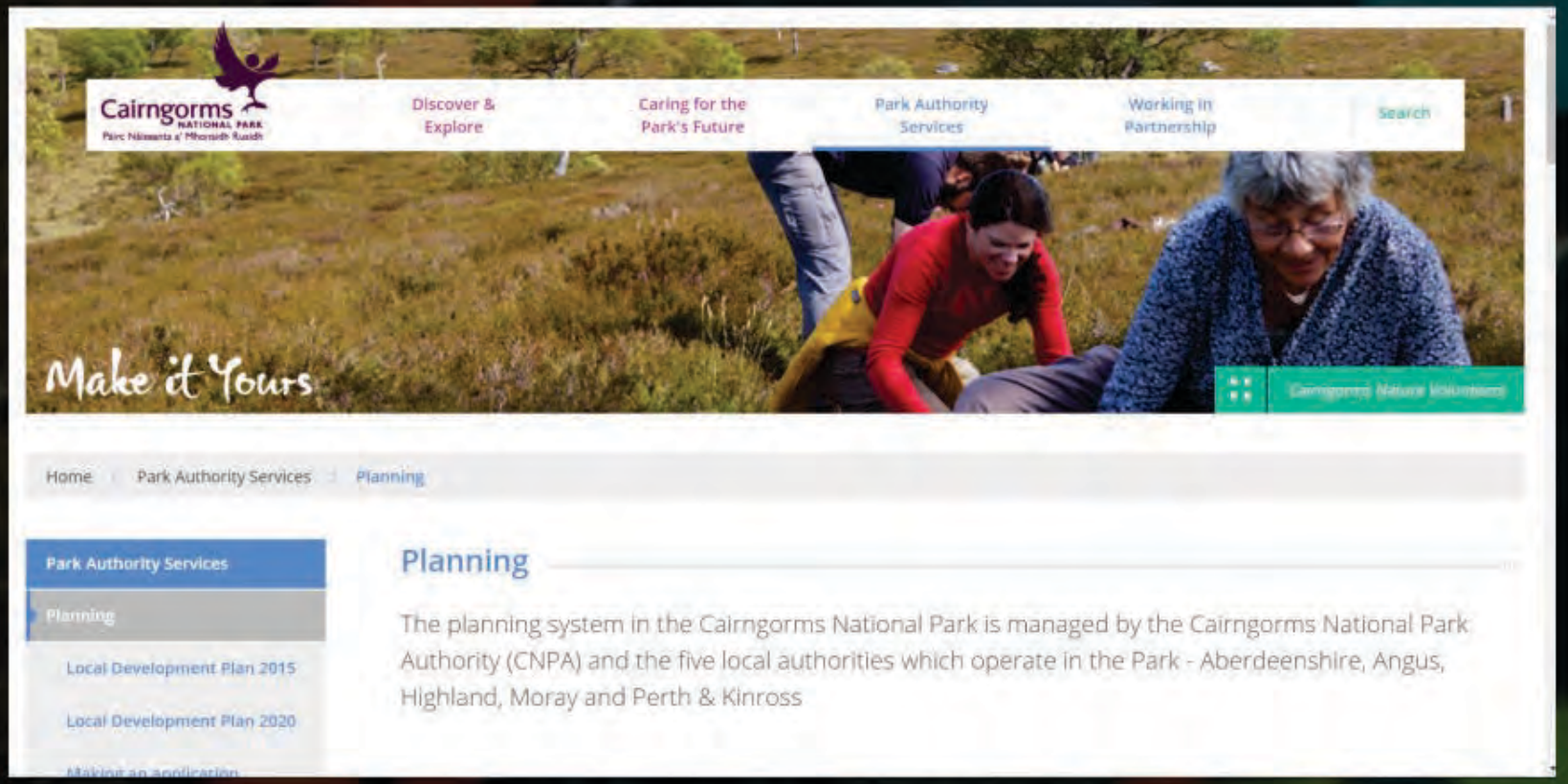
The proposed road is through standing trees. A 30metre corridor has however been felled, with timber removed to allow for the road construction, however brash and stumps are still on site. The proposed new road base course is expected to be found on the road line however surfacing is to be imported from the Client's own quarry within the block via an existing Forest class road.

This surfacing material has been already crushed to 40mm to dust and currently in stockpiles and in adequate quantities within the quarry.

Site Investigations have been undertaken along the proposed new road line with trial pits recording mainly peat and unsuitable vegetation/topsoil at a depth of 0.5m to 1 m, however between Chainages 210m and 340m peat depths increased to 1.6m.

Beneath the peat/vegetation layer there was found to be reddish brown gravelly sand with interspersed larger boulders.

Consent - Planning



Consent - Environmental

From: Anderson, Carolyn
Sent: 19 February 2018 14:06
To: 'chris.cairns@mcgowanltd.co.uk'
Cc: 'frobinson@spenergynetworks.co.uk'; 'info@tracksecology.com'
Subject: RE: Cocksburn Reservoir Path Maintenance and Upgrading

Hello Chris

Jill has asked me to reply to your email following discussion I have had with her this morning. If there's no work being carried out on the banks or bed for the new footpath then the works will fall under General Binding Rule (GBR) 6 of the CAR Water Regulations. This means no application is required to be made to SEPA for the work. The work would be deemed to be authorised. It would be of benefit if once the work has been completed, the bare banks could be reseeded to prevent silt run-off and potential erosion.

If you wish to discuss further, please do not hesitate to contact the Stirling office.

Kind Regards

Carolyn
Environment Protection Officer
Falkirk, Alloa and Stirling Team

Strathallan House
Castle Business Park
Stirling FK9 4TF
Tel: 01786 452595

Consent - Permit Requirements

External Contractors Transfer Certificate

Scottish Water

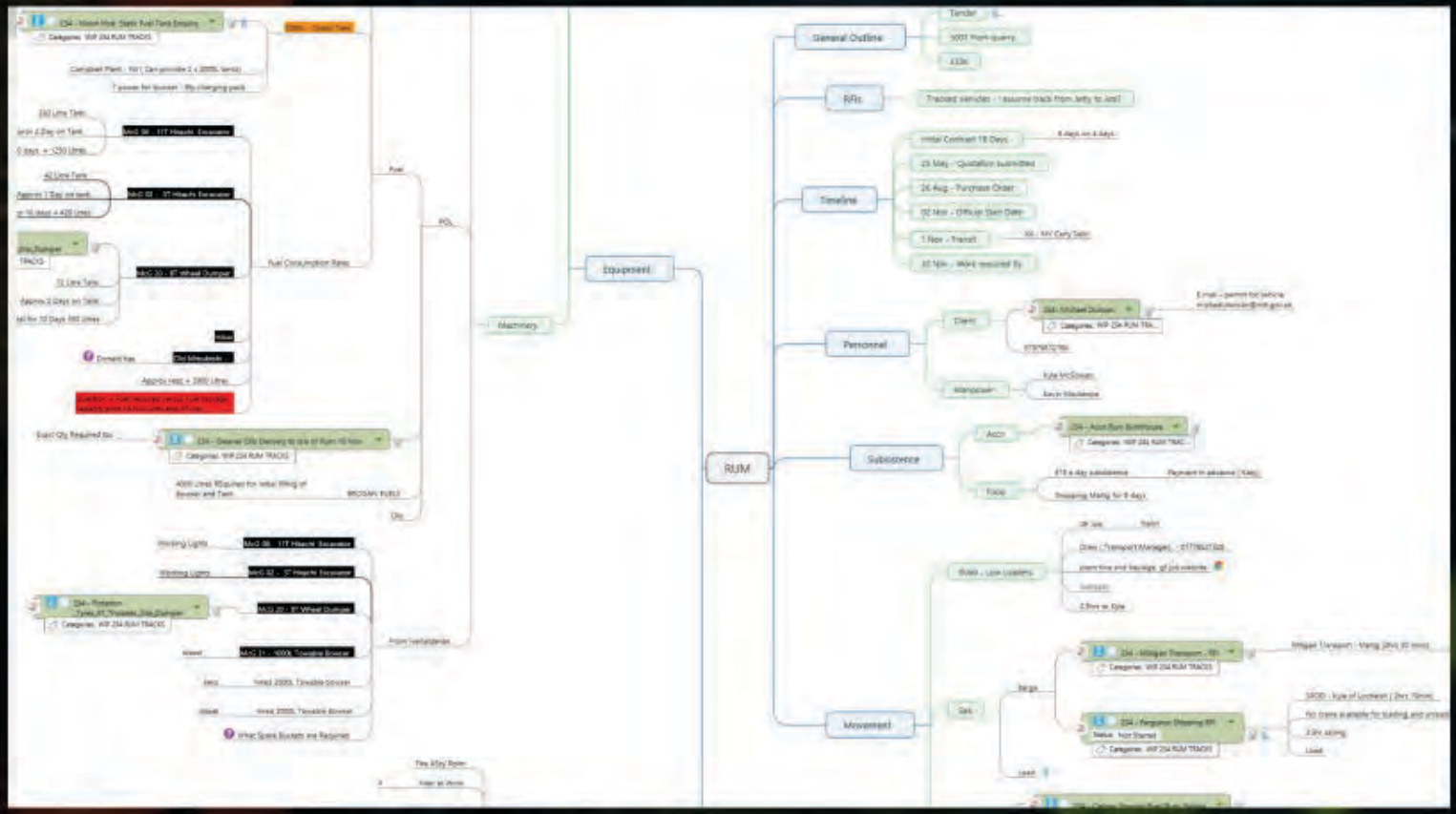
Please complete this form in block capitals Certificate No: 007904

Section 1	**Asset Name & Address:** [illegible] **Work Location:** [illegible] **SW Authorising Person:** Name: [illegible] Contact No: [illegible] Emergency Contact No: [illegible] **Person Responsible for Contract (PRC) Details** Name: [illegible] Position: [illegible] Contact No: [illegible] **Contractor Details:** Name: [illegible] Contact No: [illegible] Emergency Contact No: [illegible]
Section 2	Details of Work location to be transferred and description of work to be undertaken under this **Transfer** Certificate [illegible] Drawings detailing work area & access routes for this Transfer Certificate must be attached.
Section 3	Have you completed the Contractors Safe Working Checklist & attached it to this certificate? Circle YES / NO Have you provided all relevant documentation? Circle YES / NO Please attach the any additional paperwork to this **Transfer** Certificate. NOTE: If "NO" to either question, work cannot proceed & this certificate MUST NOT be issued During the assigned Transfer period, the Organisation/Contractor in control of the work area shall: • Ensure that the limits of the defined area are adequately defined by appropriate physical means (such as fencing, marker tape and/or signage) • Be responsible for managing access to the area, ensuring unauthorised persons are excluded • Ensure that all personnel and visitors within the working area have received appropriate instruction • Ensure that all activities within the area are undertaken in a safe manner in accordance with relevant health & safety legislation, method statements, risk assessments and best practice • Ensure that all accidents and incidents are recorded and reported in accordance with the agreed procedures
Section 4	I hereby declare that all precautions / safety arrangements detailed in **Section 3** above have been put in place and that all details are correct and will be maintained by the Contractor during the duration of the work. Only the work detailed on the **Transfer** Certificate will be carried out. This Certificate is Valid from Time: [illegible] Date: [illegible] to Time: [illegible] Date: [illegible] Signed SW Authorised Person: [illegible] Time: [illegible] Date: [illegible]
Section 5	I hereby declare that I have read and understood the conditions on this **Transfer** Certificate and will ensure that all precautions / safety arrangements detailed in **Section 3** will be maintained for the duration of the work. Signed Accepting Person: [illegible] Time: [illegible] Date: [illegible]
Section 6	**Completion / Cancellation of Work** I hereby declare that the work detailed on this **Transfer** Certificate is completed / not completed and that the plant / area are safe / not safe to be re-used to perform. Signed Accepting Person: [illegible] Time: Date:
Section 7	**Cancellation of certificate** I hereby declare that the work detailed on the Transfer Certificate is completed / not completed and that the Transfer Certificate is cancelled. Signed Authorised Person: Time: Date:

Check Asbestos Register prior to any work being undertaken
Top Copy to be retained on site by Accepting Person


Organization
of
Work
Resource Planning
Pre Start Meeting
Mobilization
Implementation
Supervision
Maintenance

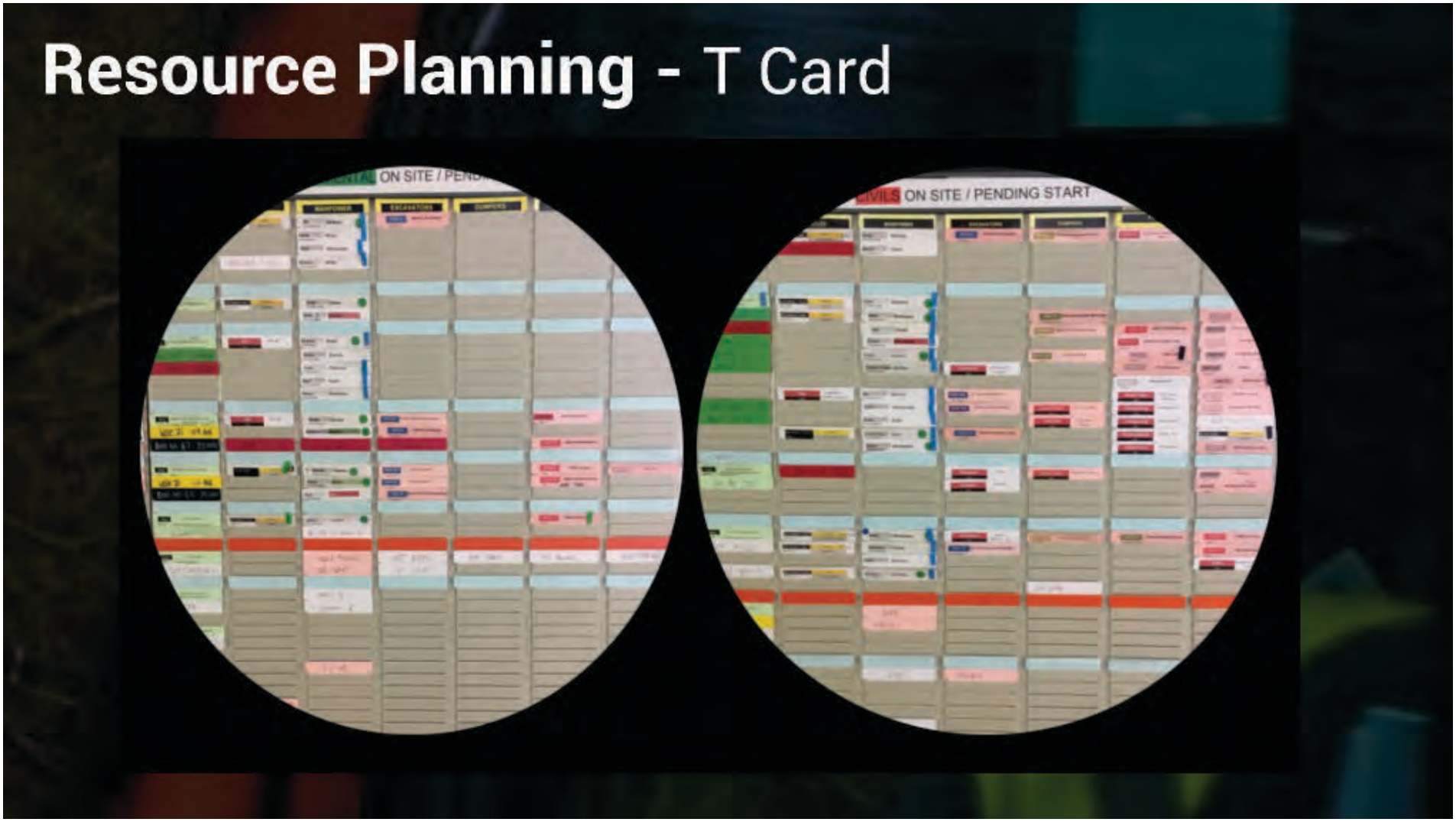
Resource Planning - Mindmap



Resource Planning - Sync Matrix

	A	B	C	E	F	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA
	RFI	ACCN REQ	TS			WEEK 11							WEEK 12							WEEK 13								
	Hol	Hols TBC	Spare		TS																							
		STATUS	TENDER No.	TENDER / PROJECT	MGR	14-Mar-16 Mon	15-Mar-16 Tue	16-Mar-16 Wed	17-Mar-16 Thu	18-Mar-16 Fri	19-Mar-16 Sat	20-Mar-16 Sun	21-Mar-16 Mon	22-Mar-16 Tue	23-Mar-16 Wed	24-Mar-16 Thu	25-Mar-16 Fri	26-Mar-16 Sat	27-Mar-16 Sun	28-Mar-16 Mon	29-Mar-16 Tue	30-Mar-16 Wed	31-Mar-16 Thu	01-Apr-16 Fri	02-Apr-16 Sat	03-Apr-16 Sun	04-Apr-16 Mon	05-Apr-16 Tue
				PROJECTS ON SITE																								
1		ON SITE	252	DUNAN BRIDGE REMEDIAL	DM	2	2	2	2	2			1	1	1	1	1										3	3
2		ON SITE	208	BEN A ON PATH (2)	BE	2	2	2	1	1			1	1	1	1	1											
3		ON SITE	101	GLENVALE PATH	RM	2	2	2	2	2			0	0	0	0	0			0	0	0	0	0				
4		ON SITE	268	BEN ANN HAND BUILD	RM	7	7	7	7	7			7	7	7	7	7			7	7	7	7	7				
5		ON SITE	263	ORUMOAK NETHERPARK FLOODING		2	2	2	2	3			3	3	3	3	3			3	3	3	3	3			3	3
6		ON SITE	226	RUM	BE	0	0	0	0	0			3	3	3	3	3			2	2	2	2	2			2	2
7		ON SITE	255	GLKES ATTADALE ACCESS TRACK	RM	1	1	1	1	1			1	1	1	1	1			1	1	1	1	1			1	1
8		ON SITE	207	LOCHROSQUE BRIDGE & TRACK	DM	9	9	9	9	9			9	9	9	9	9			7	7	6	6	6			8	8
9		ON SITE	227	BEN NEVIS PATHS	BE	7	7	7	7	7			7	7	7	7	7			7	7	7	7	7			6	6
10		ON SITE	195	GLENMORE HYDRO SCHEME	DM	6	6	6	6	6			6	6	6	6	5			6	6	6	6	6			6	6
11		ON SITE	273	JACOBS LADDER		7	7	7	7	7			7	7	7	7	7			7	7	7	7	7				
12		ON SITE	100	WILDLIFE PARK FENCING	RM	1	1	1	1	1			1	1	1	1	1			1	1	1	1	1				
				MANPOWER																								
1			Kyle	McGowan	1	208	208	208	208	208			208	208	208	208	208											
2			Malcom	Beaton	2	101	101	101	101	101			225	225	225	225	225		225	225	225	225	225	225	225	225	225	225
3			Murdo	Beaton	3	101	101	101	101	101			225	225	225	225	225		225	225	225	225	225	225	225	225	225	225
4			Graham	Beau (Trial)	4	227	227	227	227	227			227	227	227	227	227			227	227	227	227	227			227	227
5			Alex	Brown	5	227	227	227	227	227			227	227	227	227	227			227	227	227	227	227			Hols	Hols
6			Mark	Campbell	6	208	208	208	208	208			208	208	208	208	208			135	135	135	135	135			135	135
7			Maxie	Cullins	7	207	207	207	207	207			207	207	207	207	207			Hols	Hols	Hols	Hols	Hols			207	207
8			James	Dickson	8	207	207	207	207	207			207	207	207	207	207			135	135	135	135	135			135	135
9			Stuart	Flannery	9	208	208	208	Hols	Hols			225	225	225	225	225		225									
10			Allan	Fraser	10	207	207	207	207	207			207	207	207	207	207			207	207	Hols	Hols	Hols	Hols	Hols	207	207
11			Craig	Fraser	11	268	268	268	268	268			268	268	268	268	268			268	268	268	268	268				
				EQUIPMENT																								
			Excavator	Hitachi 5t Excavator	McG 03	207	207	207	207	207										135	135	135	135	135			135	135
			Excavator	Takeuchi 7t Excavator	McG 04																							
			Excavator	Hitachi 8t Excavator	McG 05	101	101	101	101	101			101	101	101	101	101			101	101	101	101	101				
			Excavator	Hitachi 13t Excavator	McG 06	225	225	225	225	225			225	225	225	225	225			225	225	225	225	225			225	225
		12	Excavator	Hitachi 13t Excavator	McG 07	208	208	208	208	208			208	208	248	248	248			248	248	248	248	248			248	248
			Excavator	Hitachi 13t Excavator	McG 08	207	207	207	207	207			207	207	207	207	207			207	207	207	207	207			207	207
			Excavator	Hitachi 135 13.5t Excavator(new)	McG 09	255	255	255	255	255			255	255	255	147	147			147	147	147	147	147			147	147
			Excavator	Volvo 14t Excavator (PT?)	McG 11	195	195	195	195	195			195	195	195	195	195			195	195	195	195	195			195	195
			Excavator	Volvo 20t Excavator (PT) (HL)	McG 12	195	195	195	195	195			195	195	195	195	195			195	195	195	195	195			195	195
			Excavator	Volvo 20t Excavator New	McG 13	207	207	207	207	207			207	207	207	207	207			207	207	207	207	207			207	207
			Tracked Dumper	Kubota KC250 TD	McG 14																							
			Tracked Dumper	Morooka MST 300 (1.5t)	McG 15	101	101	101	101	101			101	101	101	101	101			101	101	101	101	101				
		6	Tracked Dumper	Morooka MST800 (4.5t)	McG 16	208	208	208	208	208			208	208	208	208	208			135	135	135	135	135			135	135
			Tracked Dumper	New Morooka MST800 (4.5t)	McG 17	207	207	207	207	207			207	207	207	147	147			147	147	147	147	147			147	147

Resource Planning - T Card



Resource Planning - Resources Plan

Weekly Resources Plan

Location	Project	FIRST NAME	SURNAME	TYPE	ROLE	MOBILE	ACCN PLAN	Transport Plan	Trg Plan	Holiday Plan	Remarks
304	KILLIHUNTLY STONE WALLING	Craig	Fraser	FULL TIME	Environmental Operator	07813017848	NR	R22 MOA (Driver)		Wk. 35 = 27 Aug returns 28 Aug	
304	KILLIHUNTLY STONE WALLING	Mick	Watson	SUB CONTRACTOR	Environmental Operator	07512997289	NR	Own Transport			
711	MONADHLIATH DMG PEATLAND RESTORATION	Malcom (Calum)	Beaton	FULL TIME	Plant Operator	07948 202269	With Chris Cairns	Hired Veh SP 67 LWC (Driver) Liaise se with Davie Brooks ref collection point		Wk. 36 = 07 Aug only	
711	MONADHLIATH DMG PEATLAND RESTORATION	David	Brooks	FULL TIME	Plant Operator	07718791663	NR	Hired Veh SP 67 LWC (Driver)			
725	CAMERON CRESCENT MUNLOCHY GROUNDWORKS	Andy	Mackay	FULL TIME	Ground Worker Ganger	07432644028	NR	R18 MOA (Driver)		Wk. 37 = 10 Sep returns 18 Sep	
725	CAMERON CRESCENT MUNLOCHY GROUNDWORKS	Marty	Paton	SUB CONTRACTOR	Ground Worker	07783011874	NR	R18 MOA (Passenger)			
733	GARROGIE DRAIN BLOCKING	Murdo	Beaton	FULL TIME	Plant Operator	07470439124	NR	Own Transport		Wk. 36/37 = 03 Sep returns 12 Sep	
733	GARROGIE DRAIN BLOCKING	Jamie	Grant	FULL TIME	Plant Operator	07375044311	NR	Own Vehicle to Carrbridge & collect by Murdo Beaton		Wk. 38 = 17 Sep returns 24 Sep	
733	GARROGIE DRAIN BLOCKING	Paul	Ross	SUB CONTRACTOR	Plant Operator	07858185629	NR	Own way to Daviot then collection by Murdo Beaton			

Pre-Start Meeting

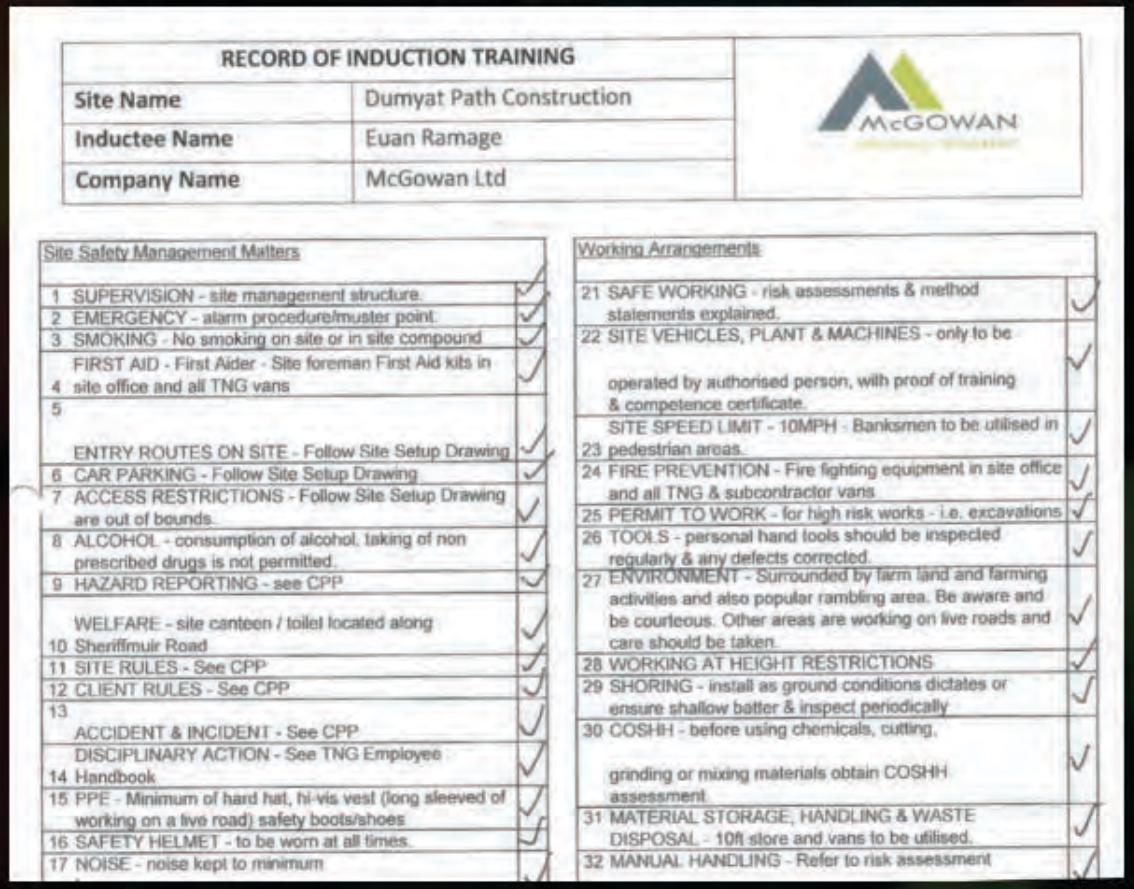
Mobilization - Advanced Signage

Mobilization - Site Establishment

Mobilization - Procurement of Material

Mobilization - Safety Signage

Implementation - Induction



RECORD OF INDUCTION TRAINING

Site Name	Dumyat Path Construction
Inductee Name	Euan Ramage
Company Name	McGowan Ltd

McGOWAN

Site Safety Management Matters	
1 SUPERVISION - site management structure.	✓
2 EMERGENCY - alarm procedure/muster point.	✓
3 SMOKING - No smoking on site or in site compound	✓
4 FIRST AID - First Aider - Site foreman First Aid kits in site office and all TNG vans	✓
5 ENTRY ROUTES ON SITE - Follow Site Setup Drawing	✓
6 CAR PARKING - Follow Site Setup Drawing	✓
7 ACCESS RESTRICTIONS - Follow Site Setup Drawing are out of bounds.	✓
8 ALCOHOL - consumption of alcohol, taking of non prescribed drugs is not permitted.	✓
9 HAZARD REPORTING - see CPP	✓
10 WELFARE - site canteen / toilet located along Sheriffmuir Road	✓
11 SITE RULES - See CPP	✓
12 CLIENT RULES - See CPP	✓
13 ACCIDENT & INCIDENT - See CPP	✓
14 DISCIPLINARY ACTION - See TNG Employee Handbook	✓
15 PPE - Minimum of hard hat, hi-vis vest (long sleeved of working on a live road) safety boots/shoes	✓
16 SAFETY HELMET - to be worn at all times.	✓
17 NOISE - noise kept to minimum	✓

Working Arrangements	
21 SAFE WORKING - risk assessments & method statements explained.	✓
22 SITE VEHICLES, PLANT & MACHINES - only to be operated by authorised person, with proof of training & competence certificate.	✓
23 SITE SPEED LIMIT - 10MPH - Banksmen to be utilised in pedestrian areas.	✓
24 FIRE PREVENTION - Fire fighting equipment in site office and all TNG & subcontractor vans	✓
25 PERMIT TO WORK - for high risk works - i.e. excavations	✓
26 TOOLS - personal hand tools should be inspected regularly & any defects corrected.	✓
27 ENVIRONMENT - Surrounded by farm land and farming activities and also popular rambling area. Be aware and be courteous. Other areas are working on live roads and care should be taken.	✓
28 WORKING AT HEIGHT RESTRICTIONS	✓
29 SHORING - install as ground conditions dictates or ensure shallow batter & inspect periodically	✓
30 COSHH - before using chemicals, cutting, grinding or mixing materials obtain COSHH assessment	✓
31 MATERIAL STORAGE, HANDLING & WASTE DISPOSAL - 10ft store and vans to be utilised.	✓
32 MANUAL HANDLING - Refer to risk assessment	✓

Implementation - Material

Implementation - Path Construction

Excavation

Implementation - Path Construction

Geo Textile

Implementation - Path Construction

Formation

Implementation - Path Construction

Final Surface

Implementation - Path Construction

Reinstatement

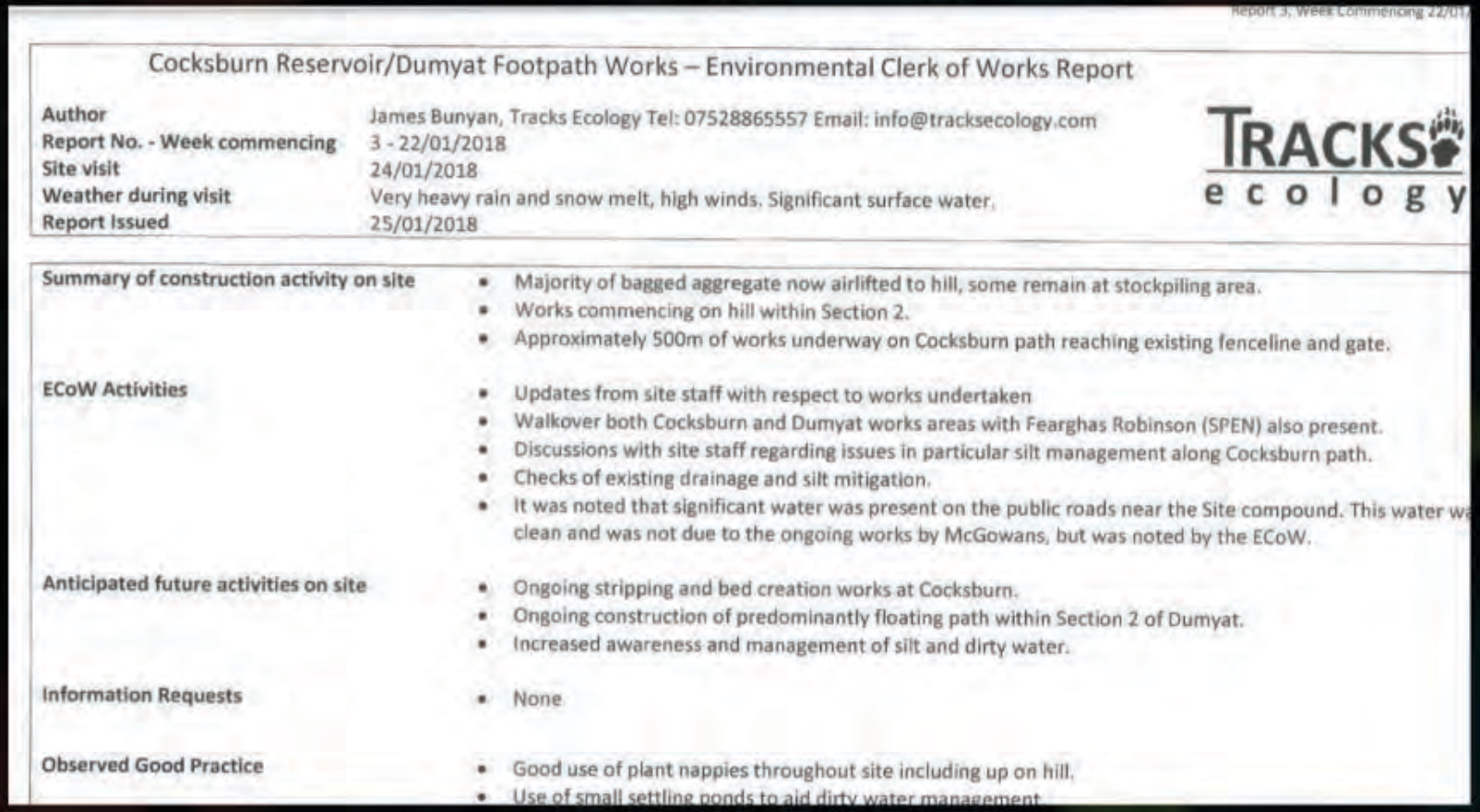
Implementation - Drainage

Ditching

Implementation - Drainage

Culvert

Implementation - Reporting



Report 3, Week Commencing 22/01

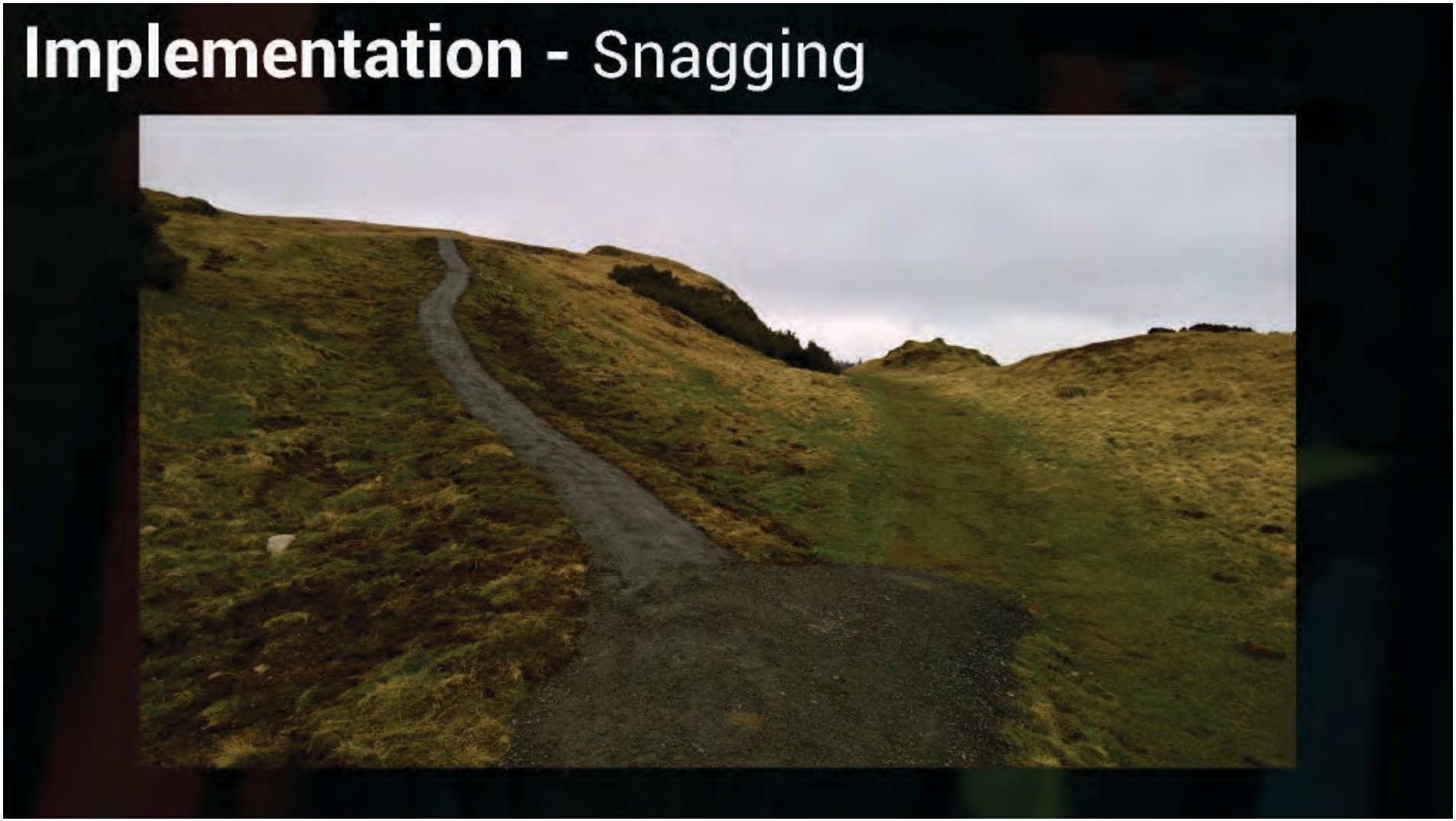
Cocksburn Reservoir/Dumyat Footpath Works – Environmental Clerk of Works Report

Author	James Bunyan, Tracks Ecology Tel: 07528865557 Email: info@tracksecology.com
Report No. - Week commencing	3 - 22/01/2018
Site visit	24/01/2018
Weather during visit	Very heavy rain and snow melt, high winds. Significant surface water.
Report Issued	25/01/2018

TRACKS ecology

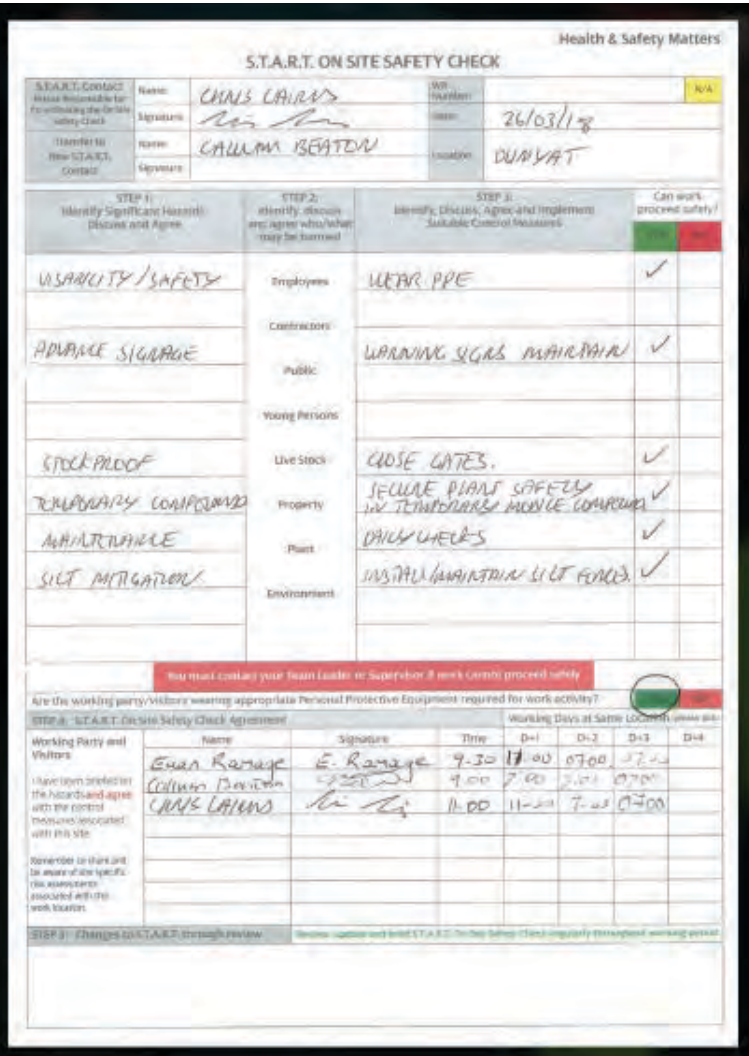
Summary of construction activity on site	• Majority of bagged aggregate now airlifted to hill, some remain at stockpiling area. • Works commencing on hill within Section 2. • Approximately 500m of works underway on Cocksburn path reaching existing fenceline and gate.
ECoW Activities	• Updates from site staff with respect to works undertaken • Walkover both Cocksburn and Dumyat works areas with Fearghas Robinson (SPEN) also present. • Discussions with site staff regarding issues in particular silt management along Cocksburn path. • Checks of existing drainage and silt mitigation. • It was noted that significant water was present on the public roads near the Site compound. This water wa clean and was not due to the ongoing works by McGowans, but was noted by the ECoW.
Anticipated future activities on site	• Ongoing stripping and bed creation works at Cocksburn. • Ongoing construction of predominantly floating path within Section 2 of Dumyat. • Increased awareness and management of silt and dirty water.
Information Requests	• None
Observed Good Practice	• Good use of plant nappies throughout site including up on hill. • Use of small settling ponds to aid dirty water management

Implementation - Snagging



Supervision -

Daily Start on Site procedures



Health & Safety Matters

S.T.A.R.T. ON SITE SAFETY CHECK

S.T.A.R.T. Contact	Name:	CHRIS CAIRNS	WR Number:		N/A
	Signature:		Date:	26/03/18	
Handed to new S.T.A.R.T. Contact	Name:	CALLUM BEATON	Location:	DUNVAT	
	Signature:				

STEP 1: Identify Significant Hazards Discuss and Agree	STEP 2: Identify, discuss and agree who/what may be harmed	STEP 3: Identify, Discuss, Agree and Implement Suitable Control Measures	Can work proceed safely? YES	NO
VISABILITY / SAFETY	Employees	WEAR PPE	✓	
	Contractors			
ADVANCE SIGNAGE	Public	WARNING SIGNS MAINTAIN	✓	
	Young Persons			
STOCK PROOF	Live Stock	CLOSE GATES.	✓	
TEMPORARY COMPOUND	Property	SECURE PLANT SAFELY IN TEMPORARY MOBILE COMPOUND	✓	
MAINTENANCE	Plant	DAILY CHECKS	✓	
SILT MITIGATION	Environment	INSTALL/MAINTAIN SILT FENCES	✓	

You must contact your Team Leader or Supervisor if work cannot proceed safely

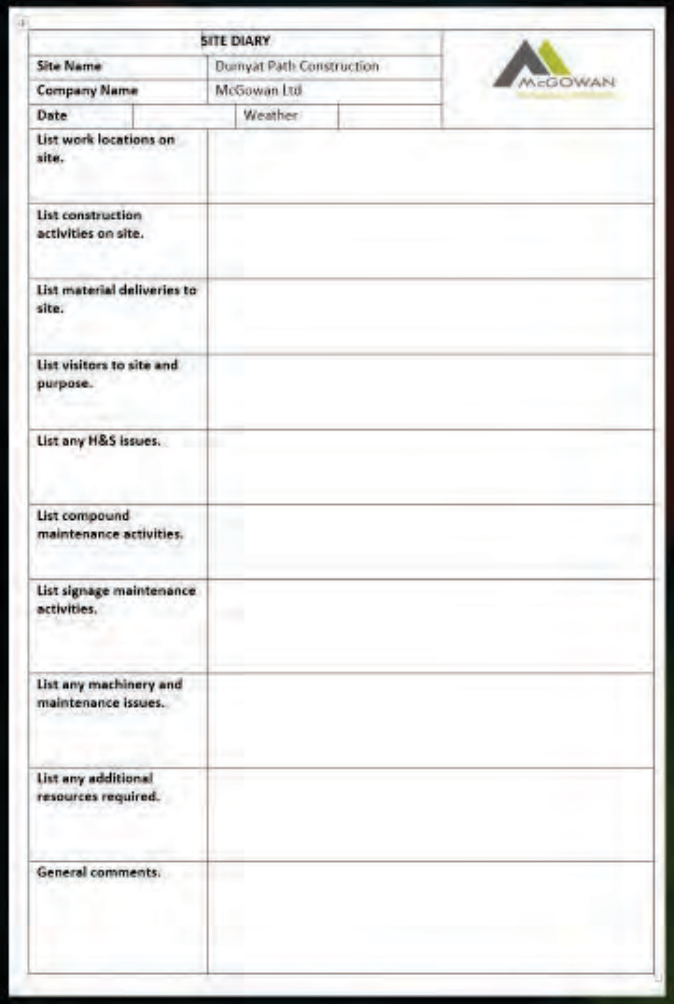
Are the working party/visitors wearing appropriate Personal Protective Equipment required for work activity? YES NO

STEP 4: S.T.A.R.T. On Site Safety Check Agreement — Working Days at Same Location (please tick)

Working Party and Visitors	Name	Signature	Time	D+1	D+2	D+3	D+4
I have been briefed on the hazards and agree with the control measures associated with this site.	EWAN RAMAGE	E. Ramage	9.30	17.00	0700	17.00	
Remember to share and be aware of site specific risk assessments associated with this work location.	Callum Beaton		9.00	7.00	7.00	0700	
	CHRIS CAIRNS		11.00	11.00	7.00	0700	

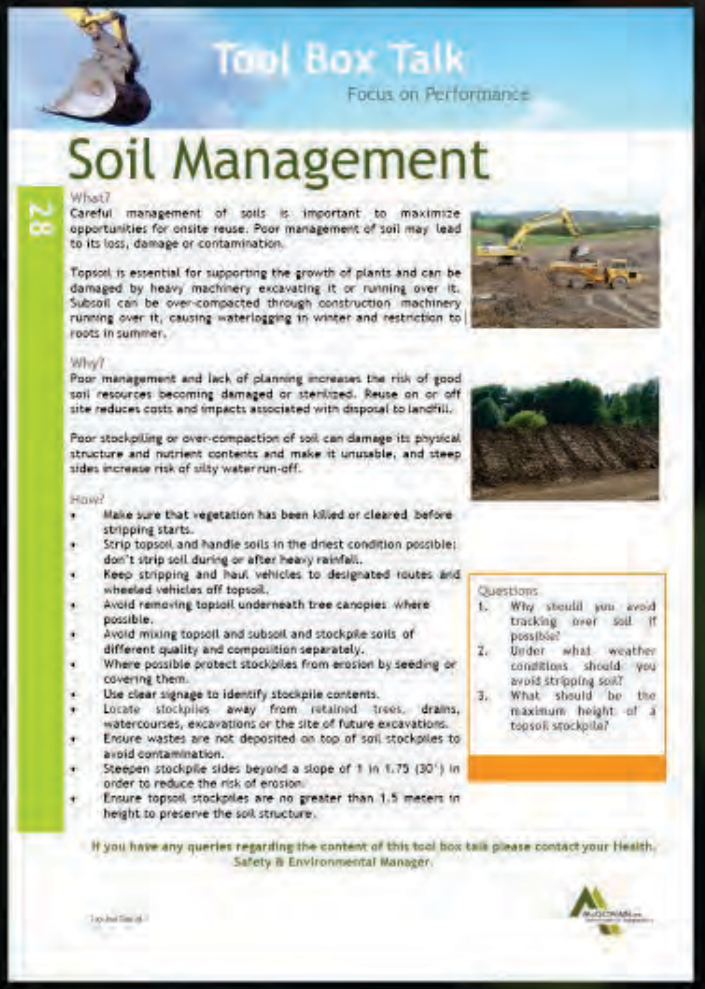
STEP 5: Changes to S.T.A.R.T. through review — Review, update and brief S.T.A.R.T. On Site Safety Check regularly throughout working period

Supervision - Site Diary



SITE DIARY			
Site Name	Dunyat Path Construction		
Company Name	McGowan Ltd		
Date		Weather	
List work locations on site.			
List construction activities on site.			
List material deliveries to site.			
List visitors to site and purpose.			
List any H&S issues.			
List compound maintenance activities.			
List signage maintenance activities.			
List any machinery and maintenance issues.			
List any additional resources required.			
General comments.			

Supervision - Tool Box Talk



Tool Box Talk

Focus on Performance

Soil Management

28

What?

Careful management of soils is important to maximize opportunities for onsite reuse. Poor management of soil may lead to its loss, damage or contamination.

Topsoil is essential for supporting the growth of plants and can be damaged by heavy machinery excavating it or running over it. Subsoil can be over-compacted through construction machinery running over it, causing waterlogging in winter and restriction to roots in summer.

Why?

Poor management and lack of planning increases the risk of good soil resources becoming damaged or sterilized. Reuse on or off site reduces costs and impacts associated with disposal to landfill.

Poor stockpiling or over-compaction of soil can damage its physical structure and nutrient contents and make it unusable, and steep sides increase risk of silty water run-off.

How?

- Make sure that vegetation has been killed or cleared before stripping starts.
- Strip topsoil and handle soils in the driest condition possible: don't strip soil during or after heavy rainfall.
- Keep stripping and haul vehicles to designated routes and wheeled vehicles off topsoil.
- Avoid removing topsoil underneath tree canopies where possible.
- Avoid mixing topsoil and subsoil and stockpile soils of different quality and composition separately.
- Where possible protect stockpiles from erosion by seeding or covering them.
- Use clear signage to identify stockpile contents.
- Locate stockpiles away from retained trees, drains, watercourses, excavations or the site of future excavations.
- Ensure wastes are not deposited on top of soil stockpiles to avoid contamination.
- Steepen stockpile sides beyond a slope of 1 in 1.75 (30°) in order to reduce the risk of erosion.
- Ensure topsoil stockpiles are no greater than 1.5 meters in height to preserve the soil structure.

Questions

1. Why should you avoid tracking over soil if possible?
2. Under what weather conditions should you avoid stripping soil?
3. What should be the maximum height of a topsoil stockpile?

If you have any queries regarding the content of this tool box talk please contact your Health, Safety & Environmental Manager.

Maintenance - Maintenance Schedule

CULAG COMMUNITY WOODLAND TRUST

MAINTENANCE SCHEDULE
PATH CONSTRUCTION
LITTLE ASSYNT

ITEM	DESCRIPTION
1	Repair any damage to path surface and if necessary top up, re-grade and compact path surface.
2	Maintain turfing in ditch by firming loose turf and replacing failed turf.
3	Maintain turfing by firming loose turf and replacing failed turf. Contain any path migration / spread and braid lines with blocking stone.
4	Pin firm any loose stones with rock wedges. Chalk up and pack any gaps between up stands and liner stones. If necessary top up and compact path surface flush with the top of uprights and the level of the liners. Clean and remove all silt and debris from waterbar and silt trap.
	Pin firm any loose stones with rock wedges. Chalk up and pack any gaps between up stands and liner stones. If necessary top up and compact path surface flush with the top of uprights and the level of the liners. Clean and remove all silt and debris from stone culvert.
5	Clean culvert pipe of silt and debris and maintain stone headwalls.
6	Chalk up and pack gaps between pitching stones with sub-base and pin firm any loose stones with rock wedges. Sweep all debris and loose material from pitched surface.


Specialist Equipment to improve quality
Engcon
Widespread
Crushing
Soft Track
Tracked Dumper
Helicopter

Specialist Eqpt - Engcon

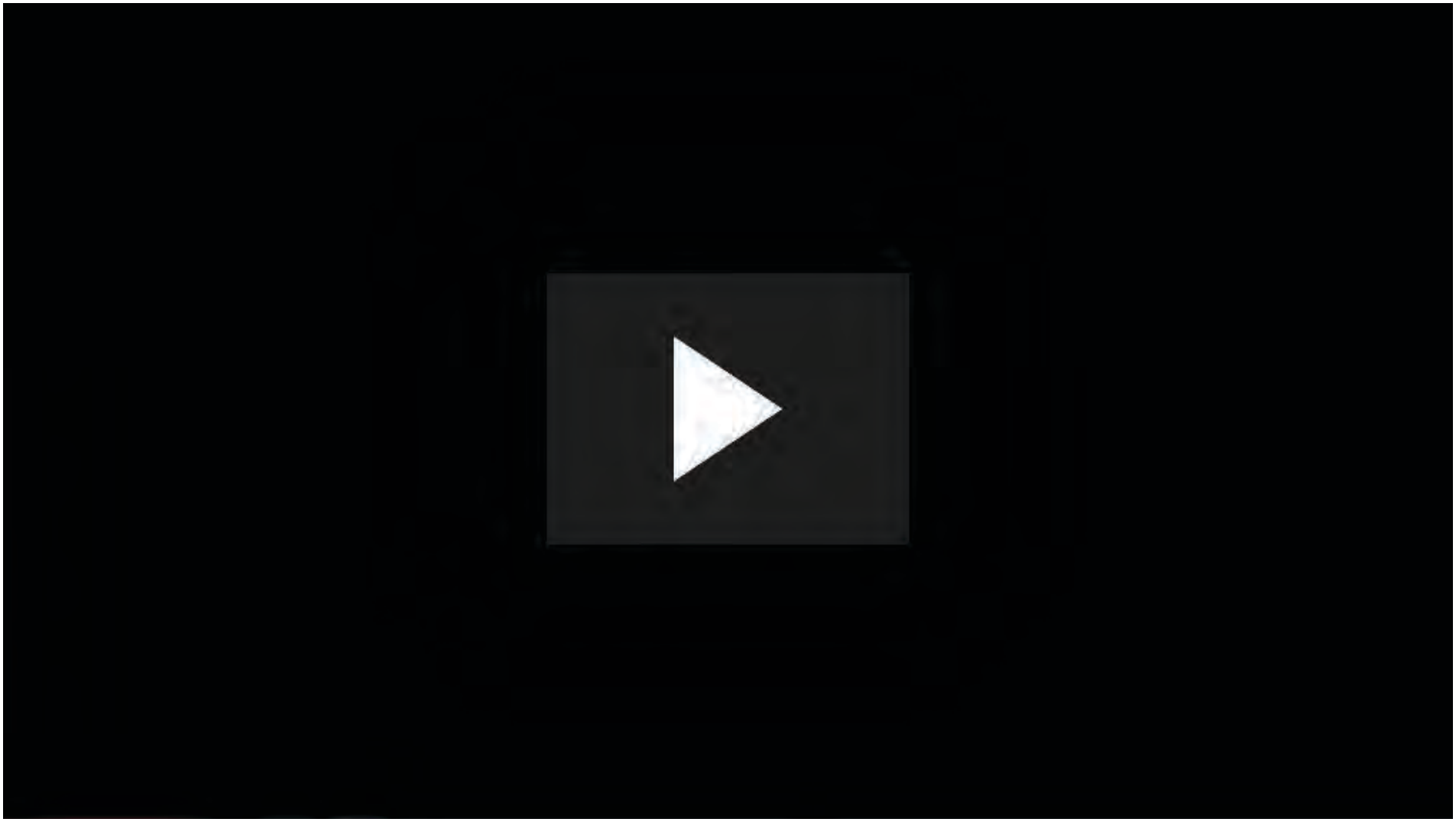
Specialist Eqpt - Widespread

Specialist Eqpt - Crusher

Specialist Eqpt - Soft Track ATV

Specialist Eqpt - Tracked Dumper


Specialist Eqpt - Helicopter

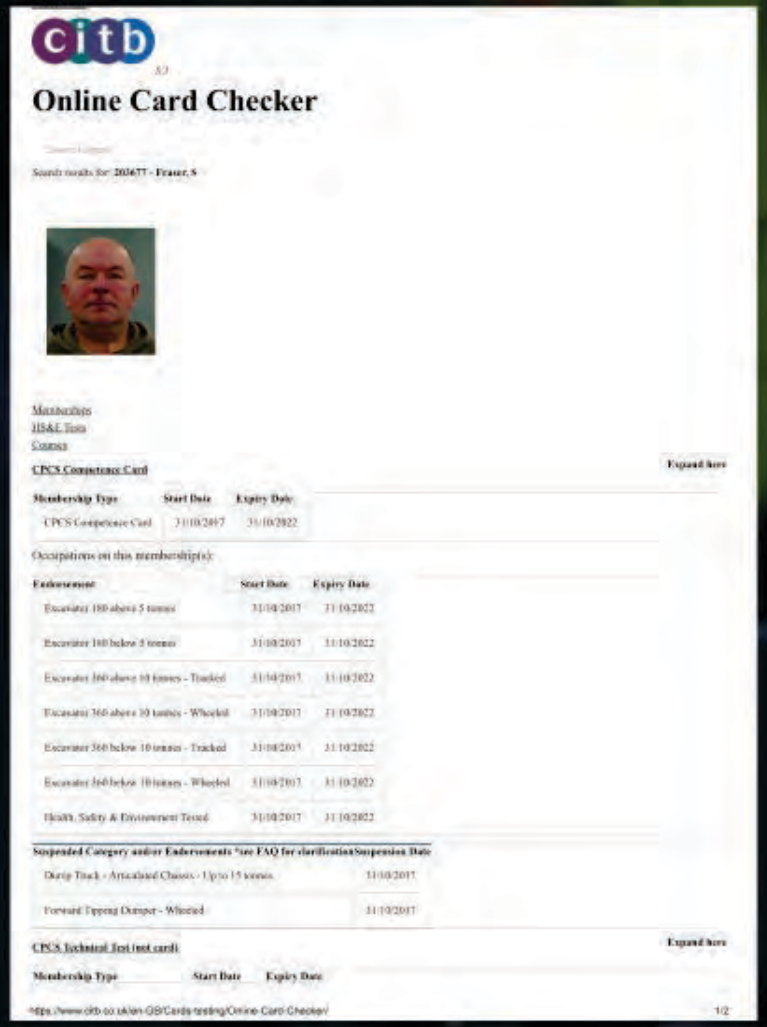



Safe System of Work
Safe Person
Safe Equipment
Safe Practice
Safe Place

Safe Person - Mentoring

Safe Person -

Qualified Experience



citb

Online Card Checker

Search results for: 202677 - Fraser, S

Memberships
H&S E Tests
Courses

CPCS Competence Card — Expand here

Membership Type	Start Date	Expiry Date
CPCS Competence Card	31/10/2017	31/10/2022

Occupations on this membership(s):

Endorsement	Start Date	Expiry Date
Excavator 180 above 5 tonnes	31/10/2017	31/10/2022
Excavator 360 below 5 tonnes	31/10/2017	31/10/2022
Excavator 360 above 10 tonnes - Tracked	31/10/2017	31/10/2022
Excavator 360 above 10 tonnes - Wheeled	31/10/2017	31/10/2022
Excavator 360 below 10 tonnes - Tracked	31/10/2017	31/10/2022
Excavator 360 below 10 tonnes - Wheeled	31/10/2017	31/10/2022
Health, Safety & Environment Tested	31/10/2017	31/10/2022

Suspended Category and/or Endorsements *see FAQ for clarification	Suspension Date
Dump Truck - Articulated Chassis - Up to 15 tonnes	31/10/2017
Forward Tipping Dumper - Wheeled	31/10/2017

CPCS Technical Test (not card) — Expand here

Membership Type	Start Date	Expiry Date

https://www.citb.co.uk/en-GB/Cards-testing/Online-Card-Checker/ 1/2

Safe Equipment - Inspections

Report Id 6416097_0001_MCG006_1-3LJTSLV

Report of Thorough In Service Examination of Lifting Equipment

as required by the Lifting Operations and Lifting Equipment Regulations (Regulation 9)

McGowan Environmental Engineering Ltd
Unit 16A Dalfaber Industrial Estate, Dal
Aviemore
Highland
PH22 1ST

Sub-location	
Client reference	MCG006
BV Identifier	1-7833439451

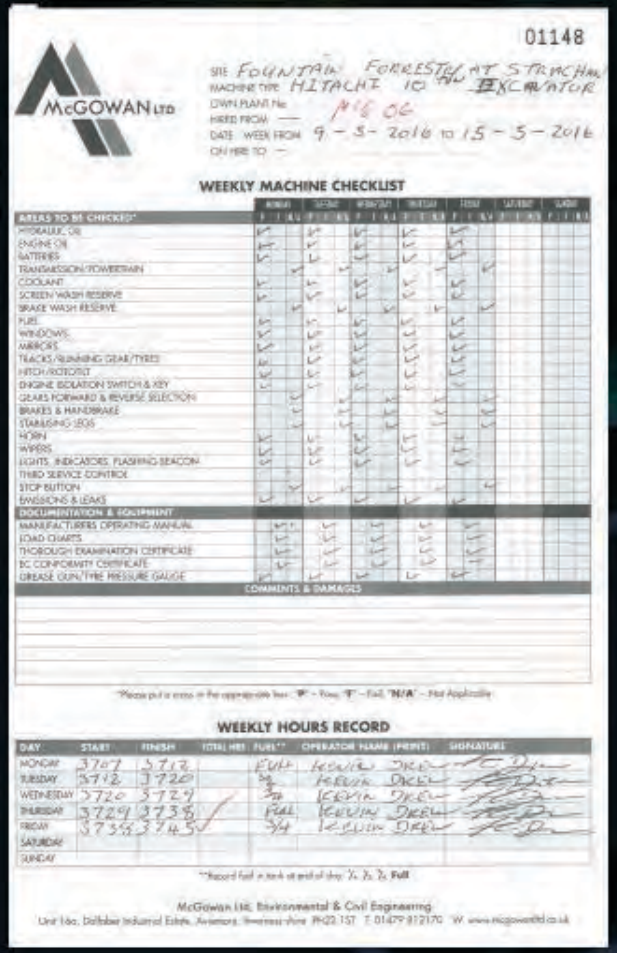
Written Scheme Reference	- Version 0 / / Y	Review Date	

Last examination date		Next examination date	12/07/2019	Date Report Issued	13/07/2018
Type of Examination carried out:	P: Periodic, 12 Monthly.				

Description	Hydraulic Excavator Diesel/Hydraulic		
Additional Details			
Manufacturer	Hitachi ZX110-3	Date	2012
Serial Mark / N°	002431		
Test Certificate N°	CE marked	Date	
SWL(s) for the configuration examined	6960 kg at 1.5 m radius Zone 3 to 1600 kg at 6 m radius Zone 1.		

Safe Equipment

Maintenance



01148

McGOWAN LTD

SITE FOUNTAIN FORESTRY AT STRACHAN
MACHINE TYPE HITACHI 10 TN EXCAVATOR
OWN PLANT No. M16 06
HIRED FROM —
DATE WEEK FROM 9-5-2016 to 15-5-2016
ON HIRE TO —

WEEKLY MACHINE CHECKLIST

AREAS TO BE CHECKED*	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
HYDRAULIC OIL	✓	✓	✓	✓	✓		
ENGINE OIL	✓	✓	✓	✓	✓		
BATTERIES	✓	✓	✓	✓	✓		
TRANSMISSION/POWERTRAIN	✓	✓	✓	✓	✓		
COOLANT	✓	✓	✓	✓	✓		
SCREEN WASH RESERVE	✓	✓	✓	✓	✓		
BRAKE WASH RESERVE	✓	✓	✓	✓	✓		
FUEL	✓	✓	✓	✓	✓		
WINDOWS	✓	✓	✓	✓	✓		
MIRRORS	✓	✓	✓	✓	✓		
TRACKS/RUNNING GEAR/TYRES	✓	✓	✓	✓	✓		
HITCH/ROTORTILT	✓	✓	✓	✓	✓		
ENGINE ISOLATION SWITCH & KEY	✓	✓	✓	✓	✓		
GEARS FORWARD & REVERSE SELECTION		✓	✓	✓	✓		
BRAKES & HANDBRAKE		✓	✓	✓	✓		
STEERING GEAR		✓	✓	✓	✓		
HORN	✓	✓	✓	✓	✓		
WIPERS	✓	✓	✓	✓	✓		
LIGHTS, INDICATORS, FLASHING BEACON	✓	✓	✓	✓	✓		
THIRD SERVICE CONTROL		✓	✓	✓	✓		
STOP BUTTON		✓	✓	✓	✓		
EMISSIONS & LEAKS	✓	✓	✓	✓	✓		
DOCUMENTATION & EQUIPMENT							
MANUFACTURERS OPERATING MANUAL	✓	✓	✓	✓	✓		
LOAD CHARTS	✓	✓	✓	✓	✓		
THOROUGH EXAMINATION CERTIFICATE	✓	✓	✓	✓	✓		
EC CONFORMITY CERTIFICATE	✓	✓	✓	✓	✓		
GREASE GUN/TYRE PRESSURE GAUGE	✓	✓	✓	✓	✓		

COMMENTS & DAMAGES

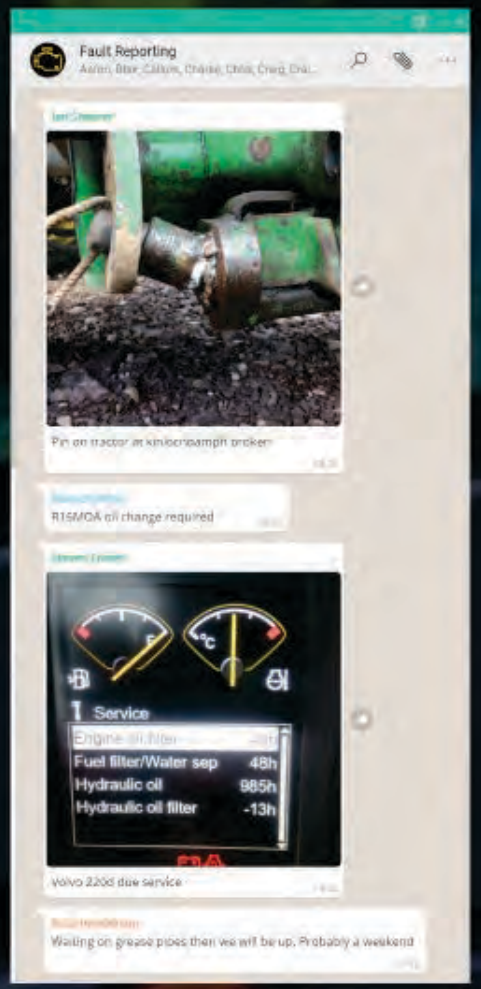
*Please put a cross in the appropriate box: "P" – Pass, "F" – Fail, "N/A" – Not Applicable

WEEKLY HOURS RECORD

DAY	START	FINISH	TOTAL HRS	FUEL**	OPERATOR NAME (PRINT)	SIGNATURE
MONDAY	3707	3712		FULL	KEVIN DREW	
TUESDAY	3712	3720		3/4	KEVIN DREW	
WEDNESDAY	3720	3724		3/4	KEVIN DREW	
THURSDAY	3724	3735		FULL	KEVIN DREW	
FRIDAY	3735	3745		3/4	KEVIN DREW	
SATURDAY						
SUNDAY						

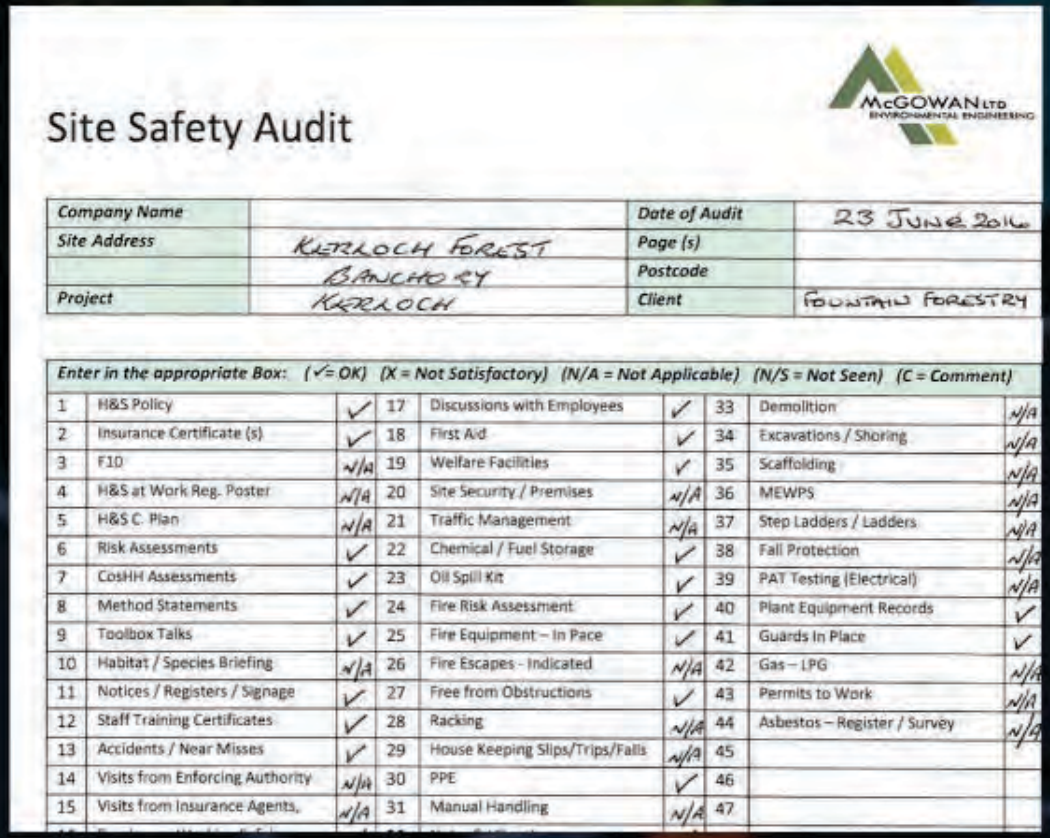
**Record fuel in tank at end of day: ¼, ½, ¾, Full

McGowan Ltd, Environmental & Civil Engineering
Unit 16a, Dalfaber Industrial Estate, Aviemore, Inverness-shire PH22 1SZ T: 01479 812170 W: www.mcgowanltd.co.uk



Safe Equipment - Maintenance

Safe Practice -
Internal Verification



Site Safety Audit

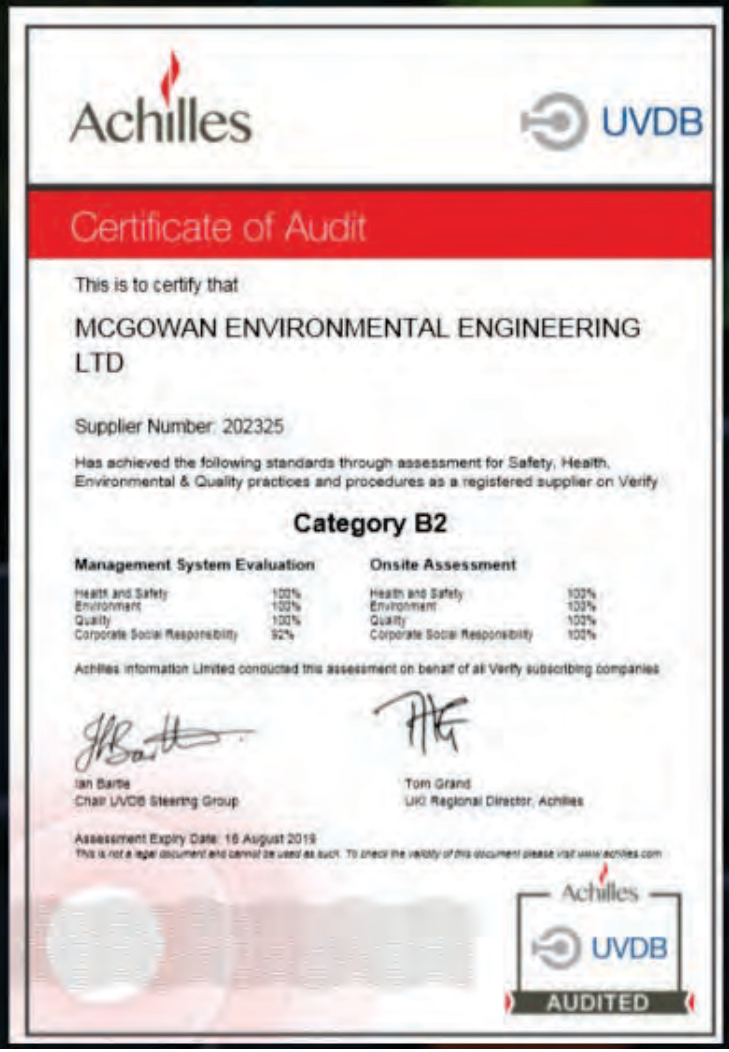
McGOWAN LTD ENVIRONMENTAL ENGINEERING

Company Name		*Date of Audit*	23 JUNE 2016
Site Address	KERLOCH FOREST	*Page (s)*	
	BANCHORY	*Postcode*	
Project	KERLOCH	*Client*	FOUNTAIN FORESTRY

Enter in the appropriate Box: (✓= OK) (X = Not Satisfactory) (N/A = Not Applicable) (N/S = Not Seen) (C = Comment)

1	H&S Policy	✓	17	Discussions with Employees	✓	33	Demolition	N/A
2	Insurance Certificate (s)	✓	18	First Aid	✓	34	Excavations / Shoring	N/A
3	F10	N/A	19	Welfare Facilities	✓	35	Scaffolding	N/A
4	H&S at Work Reg. Poster	N/A	20	Site Security / Premises	N/A	36	MEWPS	N/A
5	H&S C. Plan	N/A	21	Traffic Management	N/A	37	Step Ladders / Ladders	N/A
6	Risk Assessments	✓	22	Chemical / Fuel Storage	✓	38	Fall Protection	N/A
7	CosHH Assessments	✓	23	Oil Spill Kit	✓	39	PAT Testing (Electrical)	N/A
8	Method Statements	✓	24	Fire Risk Assessment	✓	40	Plant Equipment Records	✓
9	Toolbox Talks	✓	25	Fire Equipment – In Pace	✓	41	Guards In Place	✓
10	Habitat / Species Briefing	N/A	26	Fire Escapes - Indicated	N/A	42	Gas – LPG	N/A
11	Notices / Registers / Signage	✓	27	Free from Obstructions	✓	43	Permits to Work	N/A
12	Staff Training Certificates	✓	28	Racking	N/A	44	Asbestos – Register / Survey	N/A
13	Accidents / Near Misses	✓	29	House Keeping Slips/Trips/Falls	N/A	45		
14	Visits from Enforcing Authority	N/A	30	PPE	✓	46		
15	Visits from Insurance Agents.	N/A	31	Manual Handling	N/A	47		

Safe Practice -
External Verification



Achilles UVDB

Certificate of Audit

This is to certify that

MCGOWAN ENVIRONMENTAL ENGINEERING LTD

Supplier Number: 202325

Has achieved the following standards through assessment for Safety, Health, Environmental & Quality practices and procedures as a registered supplier on Verify

Category B2

Management System Evaluation		Onsite Assessment	
Health and Safety	100%	Health and Safety	100%
Environment	100%	Environment	100%
Quality	100%	Quality	100%
Corporate Social Responsibility	92%	Corporate Social Responsibility	100%

Achilles Information Limited conducted this assessment on behalf of all Verify subscribing companies

Ian Bartle
Chair UVDB Steering Group

Tom Grand
UKI Regional Director, Achilles

Assessment Expiry Date: 16 August 2019

This is not a legal document and cannot be used as such. To check the validity of this document please visit www.achilles.com

Achilles UVDB AUDITED

Safe Place - Site Signage


Contractors
View
06th Sept 18
02
HITACHI
McGOWAN
NATURALLY DIFFERENT


Contractors
View
06th Sept 18
02
HITACHI
McGOWAN
NATURALLY DIFFERENT

FEG SYMPOSIUM SEPTEMBER 2018

'Supporting volunteers to construct and maintain infrastructure'

Presented by Tom Wallace

Overview

Volunteers play an important role in delivering and managing recreational infrastructure throughout the country, their contributions can add real value to the work of landowners and contractors if managed effectively. This document supports todays presentation on the subject and looks at our experience of managing volunteers and trainees alongside landowners and contractors in the construction and maintenance of paths within Scotland's National Parks.

It should be noted that the involvement of volunteers should not be seen as a low cost or free alternative to contracting however the multiple social, health and economic benefits that they bring should be considered when planning works.

Background

The Mountains & The People is a partnership project led by the Outdoor Access Trust for Scotland (OATS), a national charity which aims to support the construction, management and maintenance of recreational networks throughout Scotland. OATS has worked for almost 20 years to develop skills and expertise in the design, management, construction and maintenance of lowland and upland paths and has expanded its volunteer and training offer over the years to meet demand from both funders and participants to see greater social benefits alongside the capital investment in our countryside.

Still today some people's preconception of a 'volunteer' is someone low skilled, old, keen to help but probably more hassle than they are worth. The reality could not be further from the truth. This has been clearly demonstrated over recent years with events such as the Olympic Games, Commonwealth Games and recently Glasgow's European Championships attracting tens of thousands of volunteers from all walks of life giving their time, skills and experience to ensure the success of each event. The same is true in the practical conservation and land management sectors with initiatives such as Fix the Fells, Nevis Landscape Partnership and our own Mountains & The People benefiting greatly from the efforts made by volunteers of all ages and abilities.

What is true though is that every volunteer is different, and each has their own reasons for giving their time. Some expect no reward other than the satisfaction of giving something back whilst others may see it as a stepping stone in to a new career or the means of making new friends and learning new skills.

Project Planning

When engaging volunteers in practical activities, such as the work we undertake to create new paths, repair existing features or install recreational infrastructure, the task should be planned in the same way as if it was an in-house member of staff or a contractor were undertaking the works. This would include a full assessment of the work required including risk assessment, specification and delivery plan.

This will allow you to identify the means of delivery including the skills, materials and equipment necessary to undertake the work. It will also now be possible to identify whether or not works will be subject to CDM 2015 Regs which do not differentiate between volunteer or paid contract works.

For us, planning our activity allows us to define the work as 'construction' or 'maintenance'. This is important as it has a bearing on the level of future risk and liability we are exposing ourselves to. If new features are being designed and constructed design liability and construction liability will be borne by those responsible for the works, whether they are delivered by a volunteer or a contractor and as such those undertaking the works must be sufficiently experienced or supervised by someone with the skills to ensure the works are effective.

At OATS our approach to volunteer activity planning is as follows:

- Site assessed by inhouse staff to identify the required works.
- Where new features are required (CDM) a design and associated paperwork is produced by experienced member of staff or consultant contractor with relevant experience and insurances.
- For maintenance works (non CDM) paperwork is produced by our Volunteer Coordinator.
- Construction (CDM) works led on site by experienced staff member or contractor who is responsible for Health & Safety and quality control.
- Basic maintenance (Non CDM) works are led by in house volunteer coordinator who takes responsibility for Health & Safety of the group.

Those undertaking the design and construction of any works will be liable for their effectiveness and functionality, therefore it is essential that works are designed, constructed or overseen by a suitably experienced individual. To date in house staff and contractors have been used to fulfil the role of designer or contractor however there is no reason why a suitably experienced volunteer could not fill these roles.

Roles & Expectations

When considering offering volunteering opportunities it is essential that as an organisation you consider what the volunteers role will be, what you will expect from them, what they might expect from you and what each party's responsibilities will be during the activity. Without a clear understanding of each of these expectations the risk of an unsuccessful volunteer opportunity increases significantly with the likelihood of low levels of satisfaction, limited impact or output from their time and a heightened risk to the organisation in areas such as health & safety and reputational damage.

Within The Mountains & The People project we have three clearly defined volunteer roles, a summary of which can be found below:

- Practical Conservation Volunteer
  - Working as part of a team under the supervision of an OATS volunteer leader or experienced path contractor, repairing existing path features, installing new features and managing associated habitats. Safety boots, gloves, high vis and drinks will be provided however volunteers must bring their own lunch and suitable clothing.
- Mountain Maintenance Volunteer
  - Working as part of a small preventative maintenance team under the supervision of an OATS volunteer leader. Undertaking basic maintenance such as drain clearance, cleaning stone pitching, resurfacing and vegetation control. No large stone movement or excavation. Gloves, high vis and drinks will be provided however volunteers must bring their own lunch and suitable clothing including sturdy footwear.
- Adopt A Path Volunteer
  - Lone working activity including path condition surveys of a defined route. Training will be provided in the required survey technique alongside access to online reporting tools. Information packs will be provided however volunteers must come equipped with a mobile phone and suitable clothing and equipment for a day on the hill. (details of minimum requirements will be provided during training)

In addition to these three roles, which run throughout the lifetime of the project, we also develop short term volunteer roles for bespoke activities such as:

- Fixed Point Photography Volunteer
- Geocache Development Volunteer
- Event Support Volunteer

Each volunteer role has defined activities associated to it, some of which require additional training to allow the volunteers to undertake the roles effectively and others which will require specific equipment or previous experience. Being clear about the volunteer role, its activities and what participants should expect will help manage expectations and ensure that suitable candidates put themselves forward to undertake the activity.

Training & Supervision

The level of training and supervision each volunteer requires will vary depending on their experience, the tasks that they will be undertaking, and the risk associated with the role.

Group working: It is the responsibility of the volunteer group leader, normally for us this will be a paid member of staff or contractor, to undertake a health and safety briefing at the start of each volunteering day. This will include basic training on the use of hand tools and information on key risks associated with the activity. The volunteers will be introduced to the risk assessment will sign to confirm that they understand their responsibilities.

It is the group leaders' responsibility to ensure that all works carried out by the volunteers meet the required specification for the task. For upland path work all features must meet the Upland Path Construction Standards which represent industry best practice.

Should specific tools be required for a job which the volunteers may not have used before a specific 'Toolbox Talk' training session is run on the safe use of the equipment. Ongoing on the job training is provided throughout each activity.

Lone working: Volunteers who will be undertaking activities on their own, such as Adopt a Path surveys or fixed-point photography, will be provided with specific training tailored to their needs. Adopt a Path volunteers receive training in mountain awareness and safety, lone working and risk assessment as well as training on the activity they are planning to undertake. These volunteers will not be undertaking construction works and will therefore be responsible for their own health and safety whilst out on site.

Resource Allocation

Volunteering is NOT a free alternative to the use of paid staff or contractors and the resource requirement to sufficiently support, equip, train, supervise and manage volunteers must be carefully considered before offering opportunities. That said, a well-planned approach to volunteering can allow significant value to be added to the activities you deliver, it may allow resources to be better allocated and it can be a great way of introducing new entrants to your area of work, some of whom may well become employees of the future.

Our volunteering offer is great example of the use of volunteers to support the wider aims of our work. As a trust we have supported the repair of hundreds of kilometres of path infrastructure throughout Scotland, some of which we have also committed to maintain for a defined period of time. The maintenance budget for path maintenance is defined however this budget must be managed effectively to ensure routine maintenance is carried out but also that more technical repairs caused by adverse weather or increased footfall can be tackled. Through Adopt a Path volunteers are trained to undertake basic condition surveys of their given route to help identify and report on potential issues at an early stage. Surveys are reviewed by in house staff who identify whether the work could be tackled by a group of led volunteers or if a specialist contractor will be required. This approach allows our limited resources to be targeted at the most urgent and technical issues whilst more routine maintenance can be picked up by our conservation volunteers or mountain maintenance teams.

Conclusion

When well managed and resourced volunteers can play a meaningful role in the construction, maintenance and inspection of recreational infrastructure within our countryside. Defining volunteer roles and the skills needed to complete them will increase the likelihood of a successful volunteering activity and as a result increase the likelihood of a positive experience for both the volunteer and the organisation.

Remember, regulations such as Health and Safety and CDM still apply when working with volunteers and should be integrated in to work planning to ensure compliance and to protect those taking part.

Supporting Volunteers to Construct and Maintain Infrastructure

Outdoor Access Trust for Scotland

The Mountains & The People

Who we are & what we do

Outdoor Access Trust for Scotland

The Mountains & The People

Who we are & what we do

Heritage lottery fund LOTTERY FUNDED

Outdoor Access Trust for Scotland

LOCH LOMOND & THE TROSSACHS NATIONAL PARK

Cairngorms National Park

Scottish Natural Heritage Dualchas Nàdair na h-Alba

Forestry Commission Scotland Coimisean na Coilltearachd Alba

The Mountains and The People is an Outdoor Access Trust for Scotland project

Outdoor Access Trust for Scotland

The Mountains & The People

Outdoor Access Trust for Scotland

The Mountains & The People

Outdoor Access Trust for Scotland

The Mountains & The People

£6.4m Investment
- Capital Works
- Activity Plan

Volunteering

Supporting Volunteers to Construct and Maintain Infrastructure

Outdoor Access Trust for Scotland

The Mountains & The People

Activity Planning

Outdoor Access Trust for Scotland

The Mountains & The People

Managing Expectations

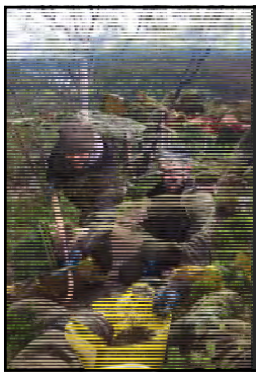
Outdoor Access Trust for Scotland

The Mountains & The People

Recruitment & Training

Outdoor Access Trust for Scotland

The Mountains & The People



Health, Safety and CDM2015

Outdoor Access Trust for Scotland

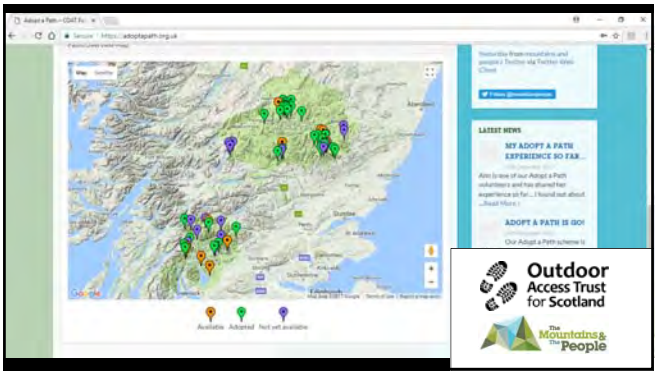
The Mountains & The People

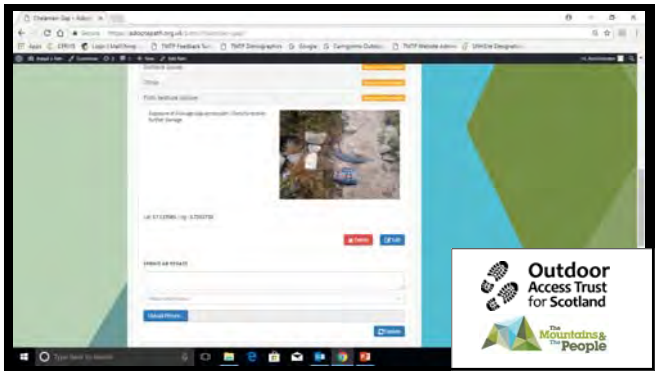
Na Beanntan agus Na Daoine

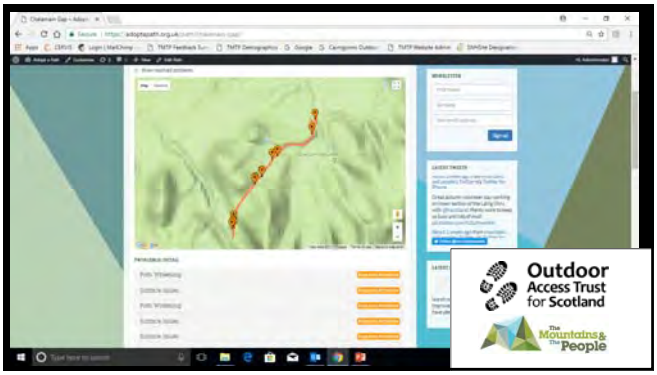
Conservation Volunteering & Mountain Maintenance Days

The Mountains & The People

Adopt A Path







Volunteering: Our story so far…

- 74 conservation work parties
- 191 Registered volunteers
- 569 volunteer work days given
- 3414 volunteer hours given
- 5 Adopt a Path training events
- 21 Path routes adopted

Outdoor Access Trust for Scotland
The Mountains & The People

Tom wallace
Activity Programme Manager
E - Tom@outdooraccesstrustforscotland.org.uk
T – 07483103906
W – www.themountainsandthepeople.org.uk

Forest Enterprise Scotland

The risks and conflicts that can occur when opening up forests to greater and greater public access, and how best to manage and mitigate this.

Also a look at some of the legislation involved.

John Ireland Health & Safety Team

Forest Enterprise Scotland

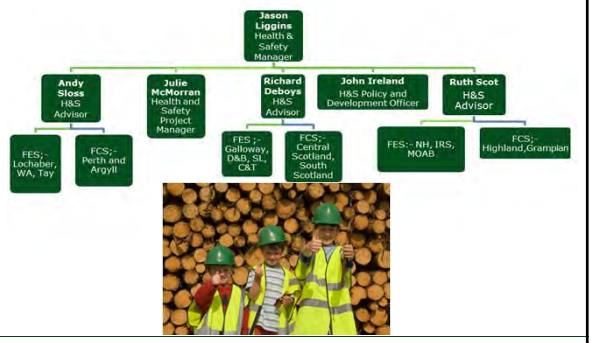
- Forestry Commission Scotland (FCS) serves as the Scottish Government's forestry department and is the largest provider of outdoor recreation in Scotland.
- Its mission is to protect and expand Scotland's forests and woodlands and increase their value to society and the environment.

Forest Enterprise Scotland

Where do we work

Forest Enterprise Scotland

Forestry Commission Scotland H&S Team

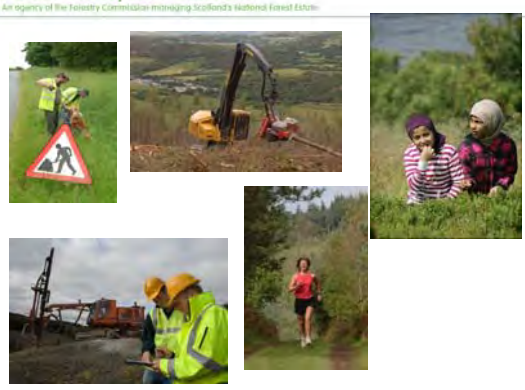


Forest Enterprise Scotland

Reasons why managing Health & Safety is important

- **Moral** - we want people to be safe
- **Legal** – it's the law
- **Financial** – if you think H&S expensive try having an Accident
- **Reputation & Authority**

Forest Enterprise Scotland



Forest Enterprise Scotland

- Scotland's forests are the most productive in the UK. Timber from the National Forest Estate is used for house building, fencing, paper and bio-fuel.
- The timber industry is vital to our country and its economy.
- Perhaps surprisingly, it's worth more to Scotland than the fishing industry, and provides more than 30,000 jobs across the wood production, forest management, haulage and processing sectors.

Forest Enterprise Scotland

The National Forest Estate generates £395 million of Gross Value Added (GVA) every year for the Scottish economy – that's more than £1 million every day. Of this:

• Forestry and timber processing accounts for £285 million of GVA

• Tourism and recreation contributes £110 million of GVA, from over 9 million visits to the estate per year

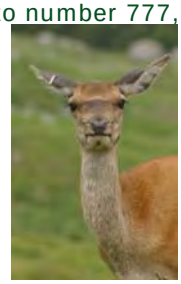
11,015 full time equivalent jobs (FTE) are supported by activity on the National Forest Estate. Of these:

• 7,225 FTE jobs were in forestry and timber processing

• 3,790 FTE jobs were in recreation and tourism

Forest Enterprise Scotland

- The Forestry Commission culls around 30,000 deer per year, approximately one third of the annual national cull of a population estimated to number 777,000.



Forest Enterprise Scotland

Activities in the Forest

- **Work (some examples) :**
- **Harvesting timber with chainsaws**
- **Harvesting timber with machines**
- **Use of pesticides**
- **Wildlife management**

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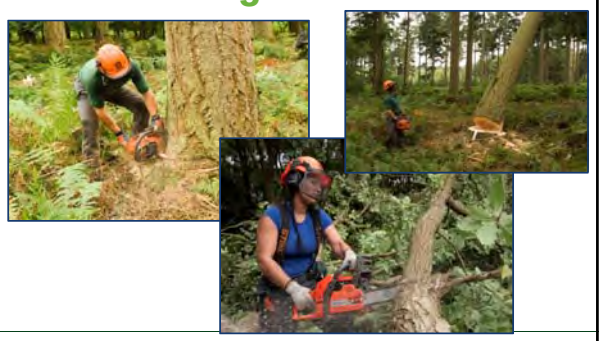
Harvester felling trees

Forest Enterprise Scotland

Forest Enterprise Scotland

Harvesting - Chainsaw



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Forwarder on Clearfell site

Forest Enterprise Scotland

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Forest Enterprise Scotland

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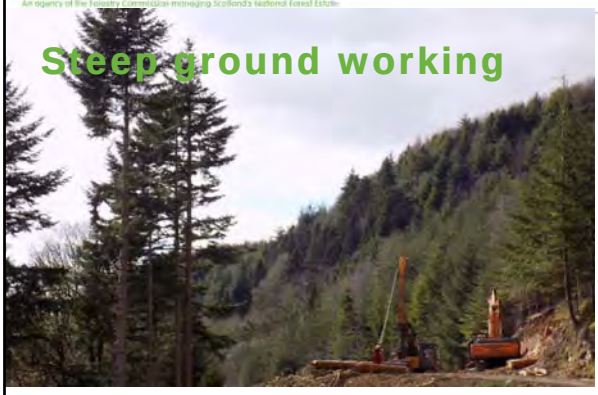
Forest Enterprise Scotland

Timber Lorry Loading

Forest Enterprise Scotland



Steep ground working

Forest Enterprise Scotland

Forest Enterprise Scotland

Timberjack – blast from the past

Forest Enterprise Scotland

Forest Enterprise Scotland

Activities in the Forest General Recreation

- Family walks
- Dog walking
- Family cycling
- Mountain biking
- Horse riding
- Orienteering

Forest Enterprise Scotland

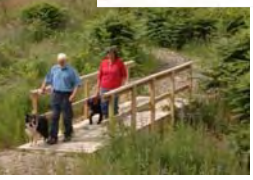
- Everyone has a right of responsible access to the Scottish countryside and this includes the woodland and forests that cover one sixth of Scotland.
- The estate covers a total of 652,000 hectares of which 480,000 hectares are woodland.

Forest Enterprise Scotland

- 9.1 million visits took place to the Estate
- 77 % of visitors live in Scotland and 15% elsewhere in UK
- Walking is the main activity – 72% of visits
- 73% are repeat visits
- 33% of visits are part of a holiday or short break, 35% are day trips involving traveling less than 6 miles and 32% are visits from further afield
- Average spend per forest visitor (excluding accommodation) is £18
- 6% of visitors advised they had a disability
- Average age of visitors is 46

Forest Enterprise Scotland

Dog Walkers



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Family Walks

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Family Cycling

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Mountain Biking in the Forest

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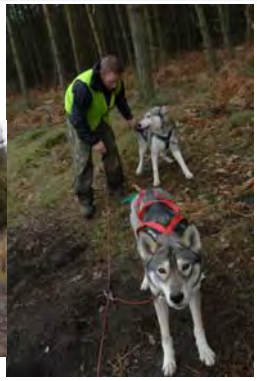
Horse Riding

Forest Enterprise Scotland

Cycle Competition

Forest Enterprise Scotland

Dog Sport



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Orienteering

Forest Enterprise Scotland

Others at work on the National Forest Estate (Recreation)

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Introduction

- **Visitor safety management** is about balancing benefits and risks in order to provide overall benefit to society and individuals.
- Its not about creating a totally risk free society or stopping important recreational and learning activities

Forest Enterprise Scotland

Activities in the Forest "Permitted" Recreation

- Mountain Bike events
- Orienteering
- Dog Sports
- Rallies
- Businesses

Forest Enterprise Scotland

Permitted Activities

- May require exclusive use of the forest;
- Zone;
- Provide information.

Forest Enterprise Scotland

Managing Conflict between:

- work activities and members of the public using the forest for recreation.
- different recreational groups using the forest for recreation.

Forest Enterprise Scotland

Work activity is covered by HASWA. We must:

- conduct that work to ensure, so far as is reasonably practicable, that members of the public who may be affected by it are not exposed to risks to their health and safety.
- assess the risks to the health and safety of members of the public which arise out of the work activity.

Forest Enterprise Scotland

Where can we get help?

Industry guidance:

- Managing Health and Safety in Forestry FISA Guidance Note
- Managing Public Safety on Harvesting Sites (FES publication)

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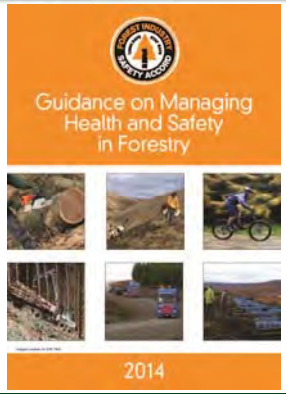

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Some examples of the available signage

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Risk Assessment

Hazards

- Struck by Timber
- Struck by Machine

Who Could be harmed?

- Members of the public entering the worksite

Level of risk

- High

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Controlling risk

Controls should be selected based on risk.

Site planning:

- Close facilities in the immediate forest area;
- Divert routes away from the work area;
- Provide information e.g. in Press;
- Restrict weekend working;
- Select a less busy period e.g. winter;

Forest Enterprise Scotland

Controlling risk

- Site planning (continued):
  - Erect information signs at forest entrances;
  - Erect prohibition & warning sign;
  - Erect effective barriers;
  - Provide information & instruction to workers to stop work if Members of the Public enters risk zone.
- Use trained & competent operators.

Forest Enterprise Scotland

Implementing & maintaining Controls

- Who is going to put the controls in place.
- Who is going to visit the site to supervise the work and ensure that the controls remain in place.

Forest Enterprise Scotland

When recreation is part of our undertaking it is covered by HASWA. We must:

- conduct that undertaking to ensure, so far as is reasonably practicable, that members of the public are not exposed to risks to their health and safety.
- assess the risks to the health and safety of members of the public which arise out of the undertaking.

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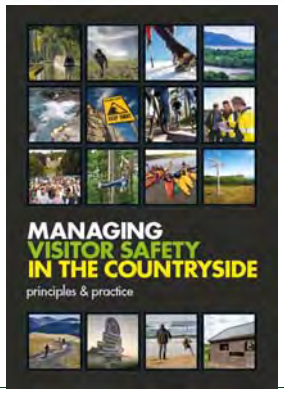
Where can we get help?

Industry guidance:

- Visitor Safety in the Countryside Guiding Principles

Forest Enterprise Scotland



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- The Visitor Safety in the Countryside Group (VSCG)was set up in May 1997.
- Forestry Commission is one of the founding members of the group
- Since then the group has been meeting regularly to exchange information and develop ideas. In particular, we have looked at how to create safe access to the countryside in ways that do not spoil the landscape and heritage, or lessen the visitor's sense of exploration and adventure.
- VSCG members own extensive land and property and encourage public access. All are committed to protecting and enhancing the environment. Our management group has day to day experience of visitor management and includes specialist safety advisers.

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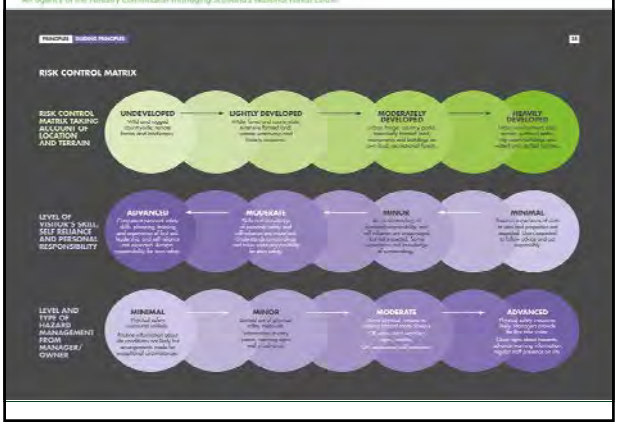

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Provide Visitor Information

- Ensure, as far as possible, that all risks are taken voluntarily.
- Inform and educate visitors about the nature and extent of hazards, the risk control measures in place, and the precautions which visitors themselves should take.

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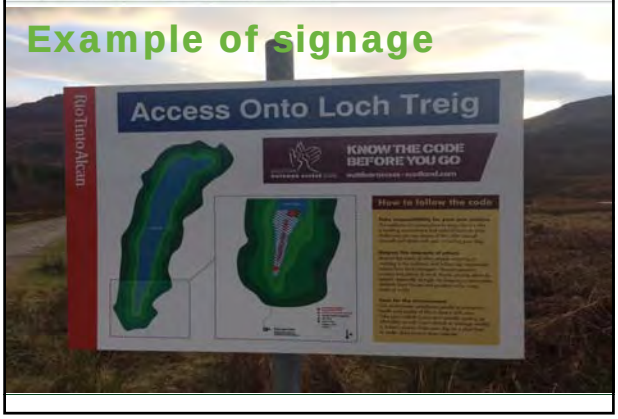
Example of signage



Forest Enterprise Scotland

Risk Assessment

- Assess risks and develop safety plans for individual sites.
- Risk control measures should be consistent.
- Monitor the behaviour and experiences of visitors to review visitor safety plans.

Forest Enterprise Scotland

Law

Forest Enterprise Scotland

Rough guide to the current Legal system

2 Sources of Law

Common Law (Judge made)
- Not written down
- contained in case decisions
- Precedents (Binding / Persuasive)
- Constantly and slowly evolving
- Standard of proof – **balance of probabilities**

Statute Law (Made by Parliament & European Union)
- Written – Acts and regulations e.g.
- HASAWA / MHASAWR
- PUWER
- LOLER
- CDM 2007 etc
- Standard of proof – **beyond reasonable doubt**

Common law is a term used to describe **who** made the law it can be either "Civil or "Criminal law"

Statute law not all statutes are criminal law many for example the occupiers liability acts are *"civil law"*

Rights of the person

Rights of Society

Criminal Law

Breach of Specific Duty

Breach of General Duty

Divisions of Law

Contract

Civil Law Tort /Delict

Tort is a civil wrong, the main torts affecting H&S are

- Negligence –(Reasonableness / Forseeability)
- Nuisance
- Trespass
- Breach of statutory duty

Criminal Law
- Absolute
  - Practicable
  - Reasonably practicable
- Prosecution v Defendant
- No need to show injury /damage H&S issues
- Cannot insure against
- Employers and others must comply with various statutory legal duties

6

Forest Enterprise Scotland

Health and Safety at Work Act 1974 - 9 basic sections

- Secure H&S and welfare of persons at work
- Protect persons other than persons at work against risk to H&S arising out of or in connection with the activities of persons at work
- Control the keeping and use of explosives or highly inflammable or otherwise **dangerous substances** and generally prevent acquisition, possession and use of such substances

Section 1

Employers To their employees — Section 2 & 9

Employers To persons other than their employees — Section 3

Self Employed To themselves and others

Controller of premises — Section 4

Designers ***Manufacturers*** ***Importers*** ***Suppliers*** etc (PUWER) — Section 6

Employees — Section 7 & 8

No section 5 its been replaced by SEPA , EA etc was Environment — **No** Section 5

Forest Enterprise Scotland

Litigation Process

Injury or Damage occurs

Unsafe Act or Condition / disagreement

Civil action for compensation (Based on Common Law)

Criminal prosecution

Claimant must demonstrate
Negligence
- **Duty of Care owed**
- **Breach of duty of Care**
- **Injury or Loss was caused by that breach**

Standard of proof;-
Balance of probabilities

This is why it is important to have
Records for example
- Design standards
- RA
- Inspection records
- Maintenance records
- Monitoring
- Accident reports

Enforcing authority Health and Safety Executive / Local authority must prove

Breach of a specific statutory requirement (No need to show injury /damage) e.g.;-

Health and Safety at Work Act 1974

Provision and use of work equipment regulations (Puwer)

Standard of proof;-

Beyond reasonable doubt

General Defences available to the Defendant
- Denial of the Facts
- No Duty of Care owed
- No breech of duty (Premises were reasonably safe etc)
- No damage or loss

6

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Nether Horsburgh Timber Haul Route

A case study on planning a new forest road in the Tweed Valley

John Ogilvie
Planning Forester, Dumfries & Borders Forest District

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Presentation Summary

- Background to Nether Horsburgh
- Planning processes for the Land Management Plan, Environmental Impact Assessment and Planning Permission for a new forest road access on the A72
- Work Planning and Site Planning
- Summary and Lessons

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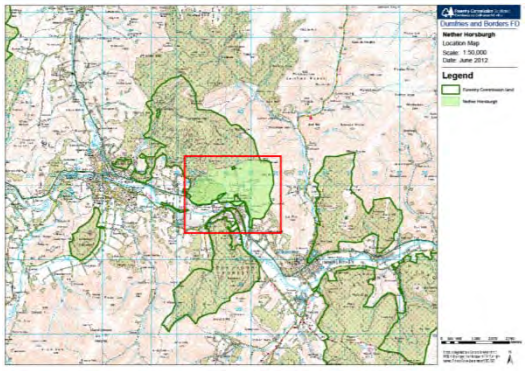

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Background to Nether Horsburgh

- Acquired by FES in 2010/11 as part of the Scottish Government Woodland Expansion Programme
- 3km east of Peebles, between Glentress Forest and the River Tweed
- Total area 524 Ha
  - 128 Ha existing woodland at Castlehill
  - 396 Ha farmland and shelterbelt woodland

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Purchased to support several FCS Objectives

- Create a "model" exemplar forest for the 21st century with a wide range of species
- Establish a commercial broadleaf and conifer crop with the resultant increase in the percentage of broadleaf woodland
- Expansion to Glentress Forest
- Potential for tourism business opportunity
- **Potential for an alternative timber haul route to take traffic away from a very busy recreation access at Glentress Peel**
- An opportunity to engage with communities
- Linkage, expansion and improvement of habitats for biodiversity

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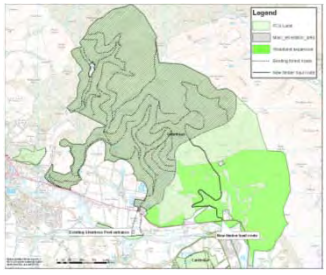
Potential for an alternative timber haul route

- Creation of a timber haul route, connecting Glentress with the A72, was identified as an important objective from the outset
- It was also clear that additional forest road and track infrastructure would be needed in creating the new woodland, and for subsequent management operations
- These objectives were developed through the land management planning process



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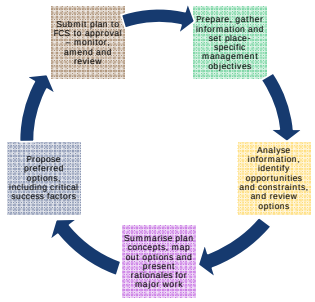
Land Management Planning Process



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Information gathering / site surveys

- Early scoping with internal & external stakeholders including neighbours and local community to gather knowledge, identify opportunities and constraints
- Site surveys
  - Open habitats
  - Native woodland
  - Birds
  - Archaeology
  - Soils
  - Private water supplies

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Stakeholders

Identified and prioritised through a process of stakeholder analysis

Stakeholders/consultees (not in order):

- Forestry Commission Scotland
- Scottish Environment Protection Agency
- Scottish Natural Heritage
- Historic Scotland (now Historic Environment Scotland)
- Scottish Borders Council
  - Built & natural heritage
  - Access
  - Landscape

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Stakeholders (cont.)

- Scottish Borders Council
  - Biodiversity
  - Archaeology
- Peebles & District Community Council
- Innerleithen & District Community Council
- Southern Upland Partnership
- Tweed Forum
- RSPB
- Red Squirrels in South Scotland
- Scottish Borders Forest Trust
- Butterfly Conservation
- Visit Scotland
- Deer Commission for Scotland
- Local communities of interest

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Collation and analysis of information – identifying opportunities and constraints

- **Site factors**
  - Statutory & legal
    - Three Scheduled Ancient Monuments
    - River Tweed Site of Special Scientific Interest/Special Area for Conservation
    - National Scenic Area – detailed landscape analysis required
    - Tweed Valley Special Landscape Area
  - Water
    - Part of the Tweed Catchment – potential spawning grounds in tributaries
    - Watercourses including Hope Burn and Dirtpot Burn – risk of run-off that could affect peak flows
    - Two private water supplies – catchments and infrastructure (pipes, tanks) to be protected

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- **Site factors (cont.)**
  - Landscape
    - Backdrop to Cardrona Village
    - Views from A72 and surrounding area
    - Landscape character of rounded hills, steep-sided valleys – potentially high visible impact
  - Heritage
    - SAMs & 40+ features across the site, including Nether Horsburgh Castle, various settlements and enclosures, with some features close to new road options -
  - Biodiversity
    - Open habitats (surveyed 2011) – areas of upland heathland habitat on higher ground, well above any proposed roads
    - Native woodlands – Nutwood SSSI and other woodland above Dirtpot Corner, beyond any proposed roads

- **Site factors (cont.)**
  - Biodiversity (cont.)
    - Birds – black grouse on higher ground adjacent to Nether Horsburgh, well above any proposed roads
    - Badgers – many badger setts found across the site but no detailed survey – potentially a significant issue
    - Squirrels – red squirrels likely to be found in plantation shelterbelts, but no detailed survey
- Access
  - Limited existing access onto the site, with a several farm tracks – new roads/tracks required
  - Legal access by Nether Horsburgh House ceased August 2014 – alternative access required from/to A72
- Topography/steepness
  - Steep slopes, in particular coming out from Glentress Forest that could limit options

Developing the LMP Concept (new road)

Factor	Opportunity	Constraints	Concept development
Current forestry access to Glentress is very busy, including timber traffic and recreational users	Create separate access and make it safer for recreation and forestry by building a new forest road	Landscape impact Potential cost	Create a new forest road through Nether Horsburgh to remove Glentress timber traffic from the Peel entrance

Developing LMP proposal for new timber haul road

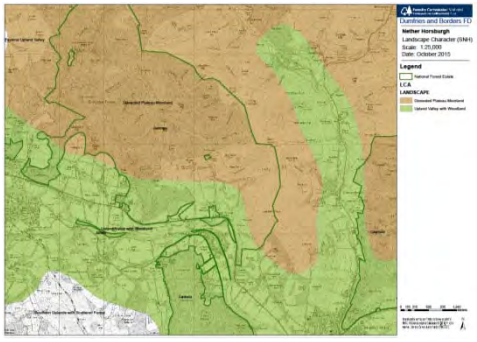
- New forest road proposed from a new entrance to the west of the existing Nether Horsburgh entrance:
  - Main forest/timber haul route for Glentress Forest and Nether Horsburgh
  - Minimising operational traffic & timber haulage via Glentress Peel
  - Separating recreational users and timber wagons
  - Reducing associated risks
- Design & location through LMP process
  - Situated lower on the hill to reduce landscape impact
  - Avoiding significant potential impacts on water and archaeology lower down the slopes

- **New road design through LMP process (cont.)**
  - Additional forest roads/tracks needed for establishing and maintaining the site
  - To be built to required standard for 44 tonne articulated lorries
  - New entrance on A72 subject to separate planning application to Scottish Borders Council – approved August 2014 with requirement to star within three years
  - Roads and woodland designed together – future screening of trees an important element of the design
  - Different options considered – Landscape Visual Impact Assessment
  - Environmental Impact Assessment determination

Landscape Analysis

- Landscape Visual Impact Assessment of the new timber haul route to address potential impacts of the route:
  - Concerns regarding landscape and visual impact expressed in the scoping exercise
  - Landscape character and visual amenity of the Tweed Valley
  - Qualities for which the area has been designated a Special Landscape Area
- Three routes were eventually considered for assessment, incorporating the main timber haul route and spur road options
- Assessed in relation to the preferred new woodland design

Landscape Character



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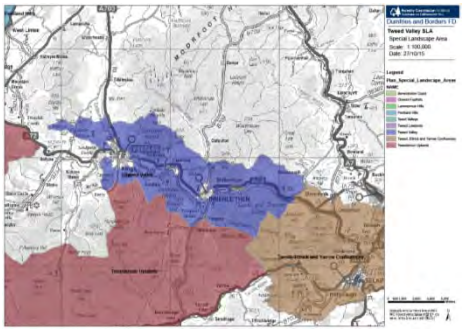
Tweed Valley Special Landscape Area



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Visual assessment looked at:

- Integration of development into the landscape
- Potential impact of the development on the hilltops
- Potential visual impact of the amount of cut and fill
- Potential impact on the setting of historical features
- Potential screening of the new road by forest management type
- Potential impact on near neighbours
- Possible mitigation measures

Leading to an overall potential negative impact rating (high - low)

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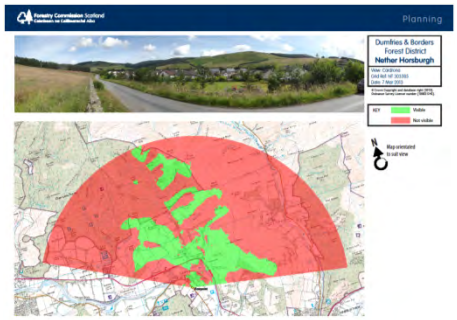
Visibility Analysis – Cardrona Village Viewpoint



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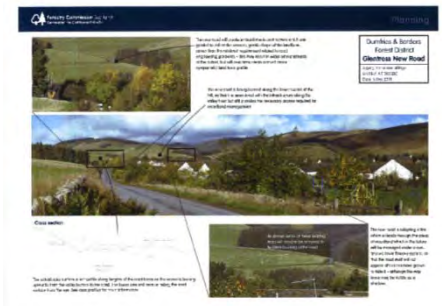
Landscape Analysis – Cardrona Village Viewpoint



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Visualisation – Cardrona Village Viewpoint

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Summary of landscape visual impact assessment

Option	Potential negative impact rating	Summary of assessment
1	Low	Shortest haul route and lowest overall impact on landscape character & visual amenity
2	High	High negative impacts on SLA, wider landscape and visual amenity
3	Medium – low	Minor potential impacts on several issues but overall acceptable

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Mitigation recommendations

- Locate the road along the lower slopes of the hill as far as possible
- Avoid 'stacking' of successive roadlines up key hillsides
- Avoid skylining the road
- Adopt a line that makes the most of gentle gradients thereby limiting the need for excessive cut and fill
- Ensure that 'hair pin' bends are located on relatively level platforms or gently graded slopes to minimise the amount of 'cut and fill' required
- Avoid using steep gradients in the road layout, which may increase traffic noise as vehicles struggle to go up hill

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Mitigation recommendations (cont.)

- Locate larger areas of excavation – such as turning points – on the most level land available, to avoid excessive cut and fill
- Adopt a line that extends through areas of woodland which in the future will be able to be managed as continuous cover, so that the road itself will not appear after trees have grown to hide it
- Create embankments and batters which are graded to reflect the smooth, gentle shape of the landform
- Take advantage of the quality top soil on this fertile site, which will be stripped, stock piled and used as topsoil on exposed land to ensure rapid re-colonisation of excavated and exposed soil

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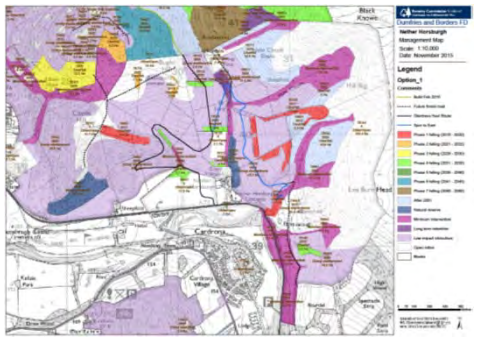
Nether Horsburgh Proposed Management



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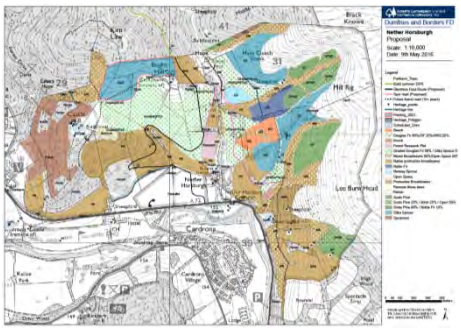
Nether Horsburgh Woodland Creation Proposal



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Environmental Impact Assessment (EIA)

Process for identifying the environmental effects, positive or negative, of a proposed project on the environment with the aim of avoiding, reducing or offsetting any adverse impacts

EIA for Nether Horsburgh was requested to cover three areas of concern:

- Significant scale of woodland creation and new forest roads in a populated area
- Landscape impact in a sensitive location (Special Landscape Area)
- New timber transport route for significant timber production from Glentress Forest

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EIA Planning Context

- UK Woodland Assurance Standard (UKWAS)
- Scottish Forestry Strategy
- Scottish Borders Council (SBC) Local Development Plan
- SBC Supplementary Planning Guidance for Forestry
- Tweed Valley Special Landscape Area

EIA Methodology

- Identify potential significant impact of the project on each 'receptor' (what is potentially being impacted on) using worse case scenarios
- Apply proposed mitigation to the impact
- Re-assess the impact on the receptor

Sensitivity + Magnitude = Significance

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EIA (cont.)

- LMP submitted November 2014, requesting screening under EIA Regulations
- FCS requested full EIA December 2014, late in the planning process, but not for the whole site
- FCS acknowledged the considerable work already carried out in scoping for the LMP, and many issues had already been 'teased out
- Requested a 'list of concerns' from LMP consultation with various agencies, local community and other stakeholders to form the basis of the EIA scoping report
- FES went through EIA process, addressing concerns and effectively re-working the LMP to satisfy EIA requirements
- FES submitted ES February 2016 – approved by FCS June 2016, with Mitigation Tables and Conditions

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EIA Conditions relevant to new roads

- Work in relation to the project shall commence within five years of the date of this consent
- No work shall be carried out in relation to the project after the expiry of ten years from the date of this consent
- Precise location and design of forest road junction with A72 to be agreed with Scottish Borders Council in accordance with the Planning Permission granted
- The drainage plan and detailed design for roads crossing watercourses to be supplied to SEPA before drainage or roading commences

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EIA Conditions (cont.)

- Prior to the commencement of works in the vicinity, all agreed buffers associated with archaeological assets identified for protection within the ES/FDP/LMP (and subsequent discussions with SBC Archaeologist) are to be clearly marked by a competent person
- Strip, map and record survey to be carried out at site 46 (on Proposal Map) as agreed before forest road construction commences in the vicinity
- The quality and quantity of the PWS to be protected during all operations in the vicinity of the PWS catchments and infrastructure including during spur road construction, ground preparation and planting

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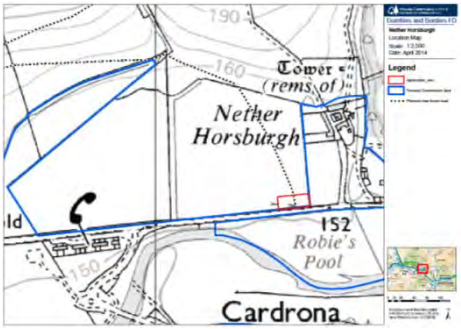
New forest road access on A72



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New forest road access from A72

- Essential to achieving a new timber haul route from Glentress
- Rationale for new route was produced along with a risk assessment
  - Comparison between Glentress Peel & new proposed access
- Pre-planning discussion between forest civil engineers and SBC
  - SBC would have preferred the existing Nether Horsburgh access, but FES would have no legal right of access, so proposed access just to the west and as close as possible to the existing one
- Stage 1 & 2 Road Safety Audit commissioned
- Planning Application submitted to SBC May 2014
  - Including drawings, rationale & road safety audit
- New access approved August 2014 with conditions

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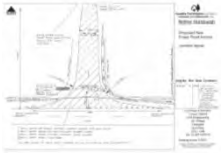

Road Safety Audit
Stage 1/2

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Conditions of planning approval

- Development to start within three years from approval date
- Development to be carried out in accordance with submitted plans and specifications
- Stage 3 & Stage 4 safety audits to be carried out before starting
- Landscaping scheme to be consulted on with neighbours and approved by Scottish Borders Council before starting
- Access to be used only by forest operations vehicles, and plans to stop other vehicular access to be approved by SBC
- Visibility splays to be provided and brown tourist sign moved prior to development starting

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Site / operational planning

- Once FDP & ES approved, able to confirm programming of the work, develop work plans and carry out detailed site planning
  - Internal planning process involving all staff to develop detailed plans for each stage of the work
  - Opportunities and constraints are confirmed – there should be no major surprises!
  - Detailed site survey and marking out
  - Further consultation / communication required with stakeholders and neighbours/local community
  - Licences /consents applied for as necessary
  - Prior notifications

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Site Planning – dealing with challenges

- Badgers – monitoring, licence application, excluding, moving
- Red squirrels – monitoring, licences
- Archaeological sites – avoiding where possible, supervised excavation
- Water courses – crossings
- Private water supplies
- A72 access point – satisfying the conditions
- Neighbour/community relations

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Badgers

- Badgers are present throughout Nether Horsburgh, with several active setts
- While aware of the presence of badgers from the outset, detailed survey was carried at the work planning stage, once exact lines were known
- Protected under the Protection of badgers Act 1992
- Where at all possible roads and tracks were planned to keep clear of setts, but unavoidable in places
- Licences from SNH were required:
  - to enable roadline felling in a shelter belt within the badger sett exclusion zone
  - to temporarily exclude a badger sett whilst road construction was carried out

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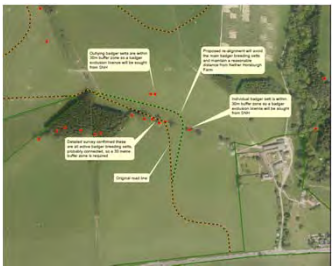
Ashbank Badger Setts



Road realignment and temporary sett exclusion

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Red squirrels

- Both red and grey squirrels are present throughout the Tweed Valley
- There was no detailed survey early in the planning stage, but it was reasonable to assume squirrels would be present in the Nether Horsburgh shelterbelts
- Drays were identified during pre-roadline felling checks in one of the shelterbelts
- These were monitored but it was difficult to confirm active drays
- A licence was applied for to disturb red squirrels and destroy identified dreys

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Archaeological sites

- As far as possible, roads and tracks were sites to avoid disturbing any sites identified during the two surveys
- Main haul route was re-aligned in one place to avoid having to excavate a potential site of interest, only to have to be moved back to avoid a badger sett!
  - SBC Archaeologist requested the soil be scraped back under supervision of an archaeologist before construction could proceed
- Spur roadline laid out through possible field system identified from LIDAR
  - Consulted SBC Archaeologist and FCS, before gaining approval to proceed

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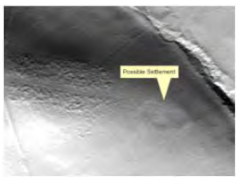
- Plans adjusted to avoid an archaeological feature
- Badger sett found close to re-aligned proposed road
- Further adjustment to the road line
- Scraped back top soil under supervision before proceeding



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Water crossings

- Two major burn crossings required, for the main haul route across Hope Burn and spur road across Dirtpot Burn
- Early consultation with SEPA who in turn consulted other relevant stakeholders including Tweed Foundation and River Tweed Commission
- Registrations applied for under The Water Environment (Controlled Activities) (Scotland) Regulations 2011

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Private water supplies

Two private water supplies, one serving a single Cottage, one serving six properties near Nether Horsburgh House

Mapped and carefully considered at an early stage in relation to new woodland creation

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Private Water Supply for Nether Horsburgh

- Identified in the roads work plan and highlighted in contract preparation and pre-commencement but…
- An excavator cut the supply pipe below the collecting tank, setting off a sequence of events and highlighting some issues with the planning process
- Issues have been worked through with some positive consequences

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New Access on A72

- Considerable effort in meeting the requirements of the Planning Approval – started just within the 3-year deadline
- Extensive discussion with SBC over visibility splays
- Issues with FES boundary and proximity to neighbours
- Traffic control required
- Press release and on-going communication with neighbours

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Summary

- OBJECTIVE ACHIEVED!
  - New timber haul route completed in good time, linking Glentress Forest with A72
  - New forest access on A72 completed
  - Main spur road completed, including a crossing of the Hope Burn, to enable timber extraction and to provide access for woodland creation
  - Additional forest tracks completed to enable woodland establishment and future timber extraction
  - Relations remain at least cordial with most neighbours and stakeholders

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View from the end of the new access track

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New haul route from Nether Horsburgh straight

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New track (future road) from Cardrona Village

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Some food for thought

- Early consultation with key stakeholders and neighbours/local community and on-going communication with all relevant parties is crucial
- Nurturing general good relations with stakeholders reaps benefits when dealing with specific and often complicated projects such as this
- Early screening for EIA is advisable
- Sometimes things don't go to plan but thorough and timely planning will minimise mishaps

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If you would like any more information on this project please contact me at:

John.ogilvie@forestry.gsi.gov.uk

Kirsty Adams

Head of Safety & Assurance, Tilhill Forestry

Profile:

Kirsty gained a NEBOSH National Diploma in Occupational Health and Safety in 2008 while working as a lab technician for Ineos. Following successful completion of the Diploma she moved to the Ineos HSE team as an HSE Advisor mainly focussing on shutdown maintenance activities.

Her work experience from there has included several global companies in construction, food manufacturing and ports and logistics, managing health, safety, environmental and quality aspects including ISO 9001, 14001 and OHSAS 18001.

Kirsty became a chartered member of IOSH in 2014 and since then works with IOSH carrying out peer reviews for other potential chartered members.

Professional Membership, Qualifications and Training

- NEBOSH National Diploma in Occupational Health and Safety
- Chartered Member of the Institution of Occupational Safety and Health (CMIOSH)

Experience and Management Roles

Kirsty first entered a management role in 2008 when she joined Hertel as HSEQ Manager where she managed the team responsible ensuring HSEQ compliance across a number of disciplines including asbestos removal, scaffolding, civil engineering works and thermal insulation installation.

Kirsty then transferred to a global food manufacturer working as HSE Manager for one of their largest abattoirs and butcheries. During this time she developed an HSE apprentice program and recruited and mentored her own HSE apprentice who is now a fully qualified HSE professional in his own right.

Following this Kirsty joined a large ports and logistics company and became Scottish Operations Health and Safety Manager. Covering 7 ports and managing a team of three health and safety professionals she was responsible for all aspects of health and safety including the management of certification to OHSAS 18001. This role also allowed Kirsty to develop a behavioural safety programme for the port industry.

In August 2017, Kirsty joined Tilhill as Head of Safety and Assurance, leading a team of three professionals. Since joining Tilhill, Kirsty has reviewed the safety and assurance objectives, created a quarterly plan for safety and assurance, become the Chair of a FISA Working Group on Learning and Behaviours and also the Project Leader of a public awareness of safety in the forest project.

Public Awareness of Safety in the Forest

TILHILL PROJECT

Tilhill embarked on a project in 2017 to review public awareness of safety in the forest following an investigation into a fatality of a member of the public.

The project objectives were:

- Carry out a review of all recorded incidents / near misses within Tilhill Forestry where members of the public have given cause for concern around forestry operations
- Identify lessons learned from these incidents / near misses and actions taken
- Carry out a review of current signage in use by Tilhill Forestry
- Carry out a review of current signage used by the industry
- Carry out a review of Site Diaries/One Note to determine how managers record site visits including signage reviews
- Conduct forest walks as a member of the public would where signage/barriers exist to determine appropriateness of placement and message provided (sample group only)
- Conduct a survey of the general public to determine levels of awareness
- Identify improvements and make recommendations

INSIST ON SAFETY

OUTCOMES

- There were a significant number of near misses involving members of the public at harvesting sites. These ranged from altercations with members of the public to members of the public putting themselves in danger by approaching operations
- Tilhill changed its safety management documents to ask more questions about controlling members of the public and also how those risks were being mitigated
- A signage review was undertaken by Tilhill internally and also at our Insist on Safety Days and feedback passed on to a sub team to carry out a further review of all signage
- A film showing the operators eye view of harvesting/forwarding and HGV operations in the forest has been developed and will be shared on social media and YouTube
- It is hoped this film will eventually be shared by BBC programs Landward and Coutryfile
- Contact has been made with the Ramblers association regarding working with them to help members of the public understand the hazards and risks in our forests
- Working with educational bodies such as Royal Highland Education Trust to develop a series of educational modules surrounding safety in the forest

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SIGNAGE

- Tilhill will continue to review safety signage and have met with a design company to redevelop some well known signs

INSIST ON SAFETY

SIGNAGE Cont..

INSIST ON SAFETY

WHATS NEXT?

- Creation of a FISA working group
- Further development of signage to communicate with members of the public
- Awareness film shared through social media, YouTube and media
- Work with educational bodies to create educational programs

- All of this to reach the ultimate goal of educating members of the public to help them safely use commercial forests.

INSIST ON SAFETY

Questions / Discussion

INSIST ON SAFETY

John Everitt – Short Summary

In the presentation I will be discussing how we manage the public access and associated engineering assets for Chatsworth Settlement Trustees on the Chatsworth and Bolton Abbey Estate.

I shall give a brief overview about the Estates and their history before describing the visitor side of the business and how that affects the day to day running of a mixed Estate.

I will then detail the wide types of built structures we manage on the estate, ranging from a 19th century rockery to a Pop up Pirate ship.

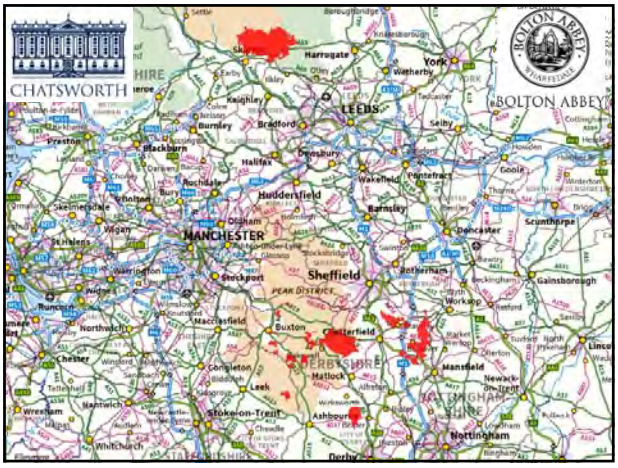
Finally we shall discuss how we manage the life cycle of these various assets and detail the inspection regimes and systems we use.

CHATSWORTH

BOLTON ABBEY

Managing Public Access on a Modern Estate

John Everitt Forestry Manager
Chatsworth Settlement Trustees
Chatsworth and Bolton Abbey Estates



Chatsworth Estate
Derbyshire

Bolton Abbey Estate
North Yorkshire

Benefits from encouraging public access onto the Devonshire Estates

Benefits from encouraging public access onto the Estates

CHATSWORTH

Benefits from encouraging public access onto the Estates

BOLTON ABBEY

CHATSWORTH

Benefits from encouraging public access onto the Estates

BOLTON ABBEY

CHATSWORTH

Benefits from encouraging public access onto the Estates

BOLTON ABBEY

FSC

100%

From well-managed forests

CHATSWORTH

Engineering Assets on the Estates

BOLTON ABBEY

CHATSWORTH

Paxton's Aqueduct, Strid Wood Chatsworth

CHATSWORTH

Coal Tunnel Chatsworth Gardens

CHATSWORTH

Paine's Bridge

Chatsworth Park

CHATSWORTH

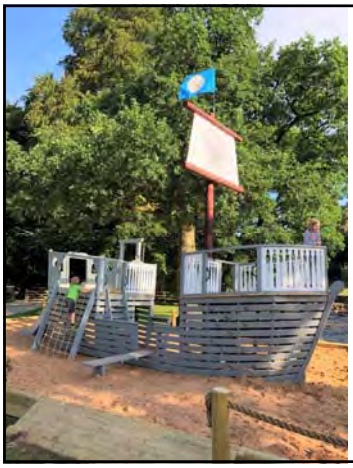
Stepping Stones River Wharfe
Bolton Abbey

BOLTON ABBEY

CHATSWORTH

Wooden Footbridge
Chatsworth Gardens

BOLTON ABBEY



BOLTON ABBEY

Pop up Beach and Pirate Ship Adventure Playground

CHATSWORTH

All Ability Trails

BOLTON ABBEY

CHATSWORTH

How do we manage the lifecycle of those assets?

BOLTON ABBEY

CHATSWORTH

Questions??

BOLTON ABBEY