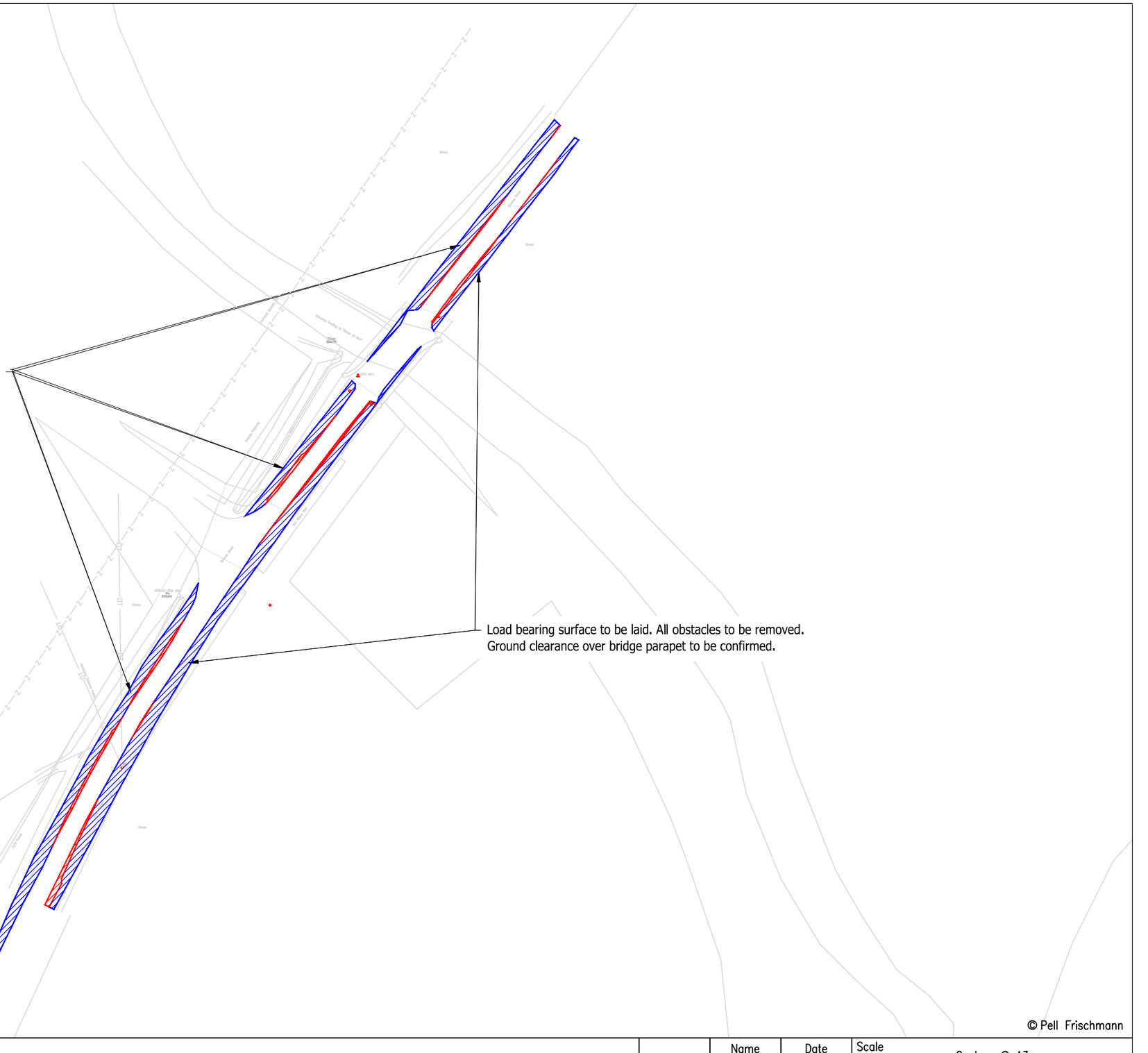
SG155 Mitigation



As built drawings have not been provided and as such indicative road edges have been provided however mitigation may have already been provided.

Pell Frischmann
93 GEORGE STREET, EDINBURGH, EH2 3ES
Tel: +44 (0)131 240 1270
Email: pfedinburgh@pellfrischmann.com
www.pellfrischmann.com

Client: Statkraft

Key: Wheel SPA | Body SPA | Load SPA | Indicative | Over-run | Over-sail

Project: Appin Wind Farm

Drawing Title: SG155 / N163 / SG170 Blades & 29.977 x 4.8 x 4.793 Tower

SPA Location: Water of Ken Road Polifferie Burn

	Name	Date
Drawn	GLJ	15/07/2022
Designed	GLJ	15/07/2022
Checked	GB	15/07/2022
Point of Interest		93

Scale: Custom @ A3

210622 Appin Tracking [SG155 N163 SG170]_Part2 Final.dwg

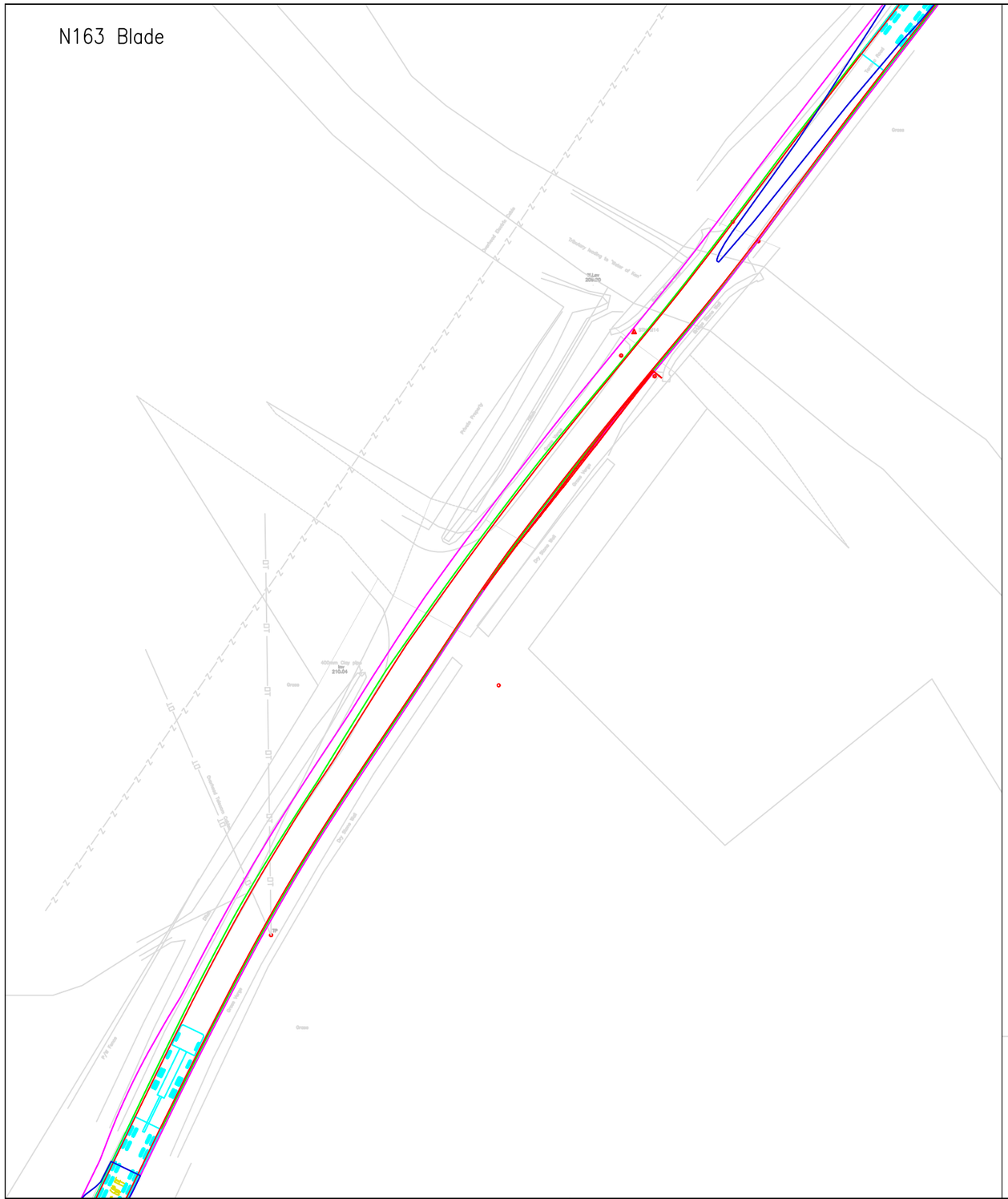
Drawing Status: Draft

Drawing No.: SK58A

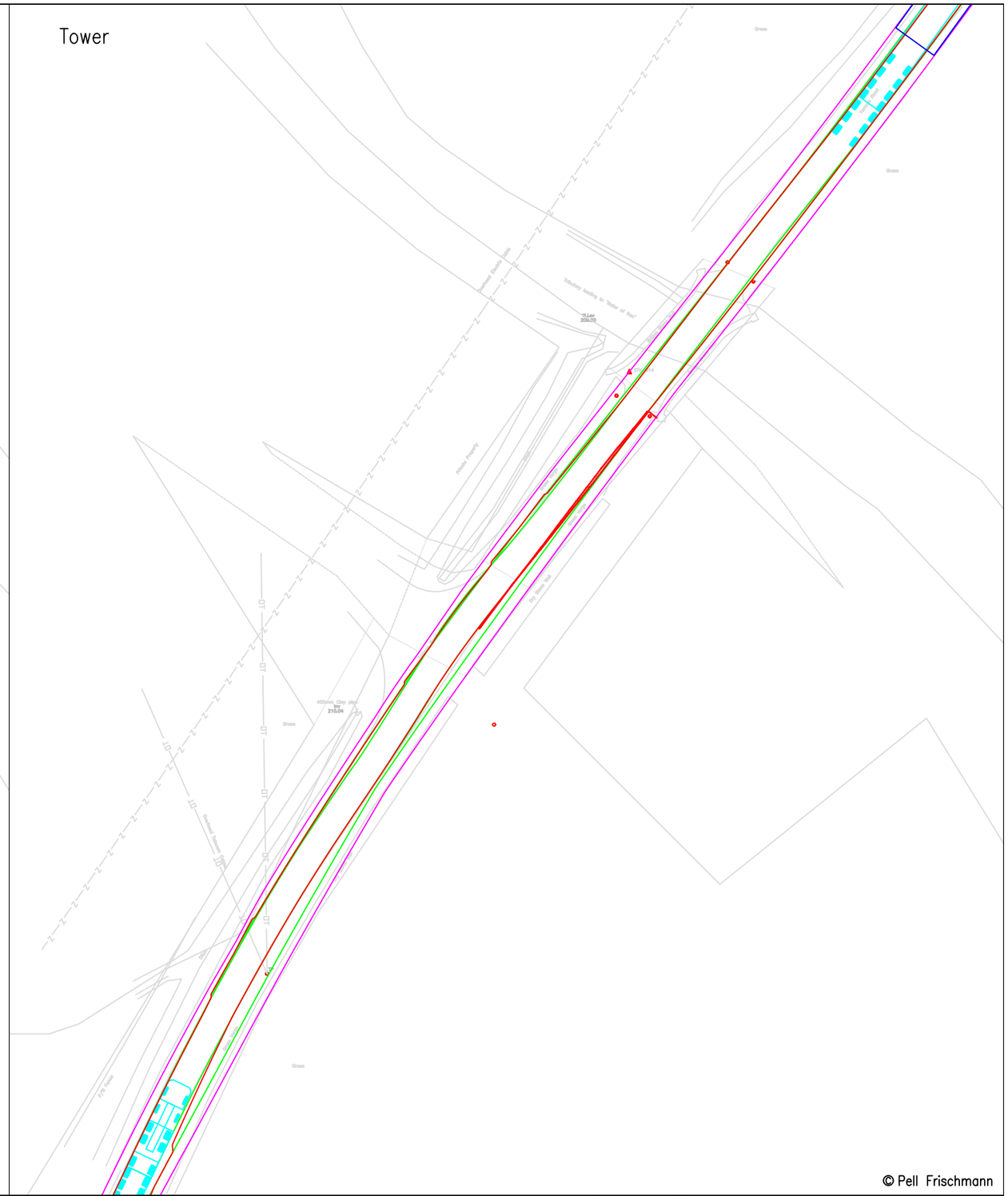
Notes:
1. All mitigation is subject to confirmation through a test run.
2. This is not a construction drawing and is intended for illustration purposes only.

Revision: 1

N163 Blade



Tower



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Tel: +44 (0)131 240 1270
Email: pfedinburgh@pellfrischmann.com
www.pellfrischmann.com

Client: Statkraft

Key: Wheel SPA | Body SPA | Load SPA | Indicative | Over-run | Over-sail

Project: Appin Wind Farm

Drawing Title: SG155 / N163 / SG170 Blades & 29.977 x 4.8 x 4.793 Tower

SPA Location: Water of Ken Road Polifferie Burn

	Name	Date
Drawn	GLJ	15/07/2022
Designed	GLJ	15/07/2022
Checked	GB	15/07/2022
Point of Interest		93

Scale: 1:500 @ A3

Project No. 220622

File: 220622 Appin Tracking [SG155 N163 SG170]_Part2 Final.dwg

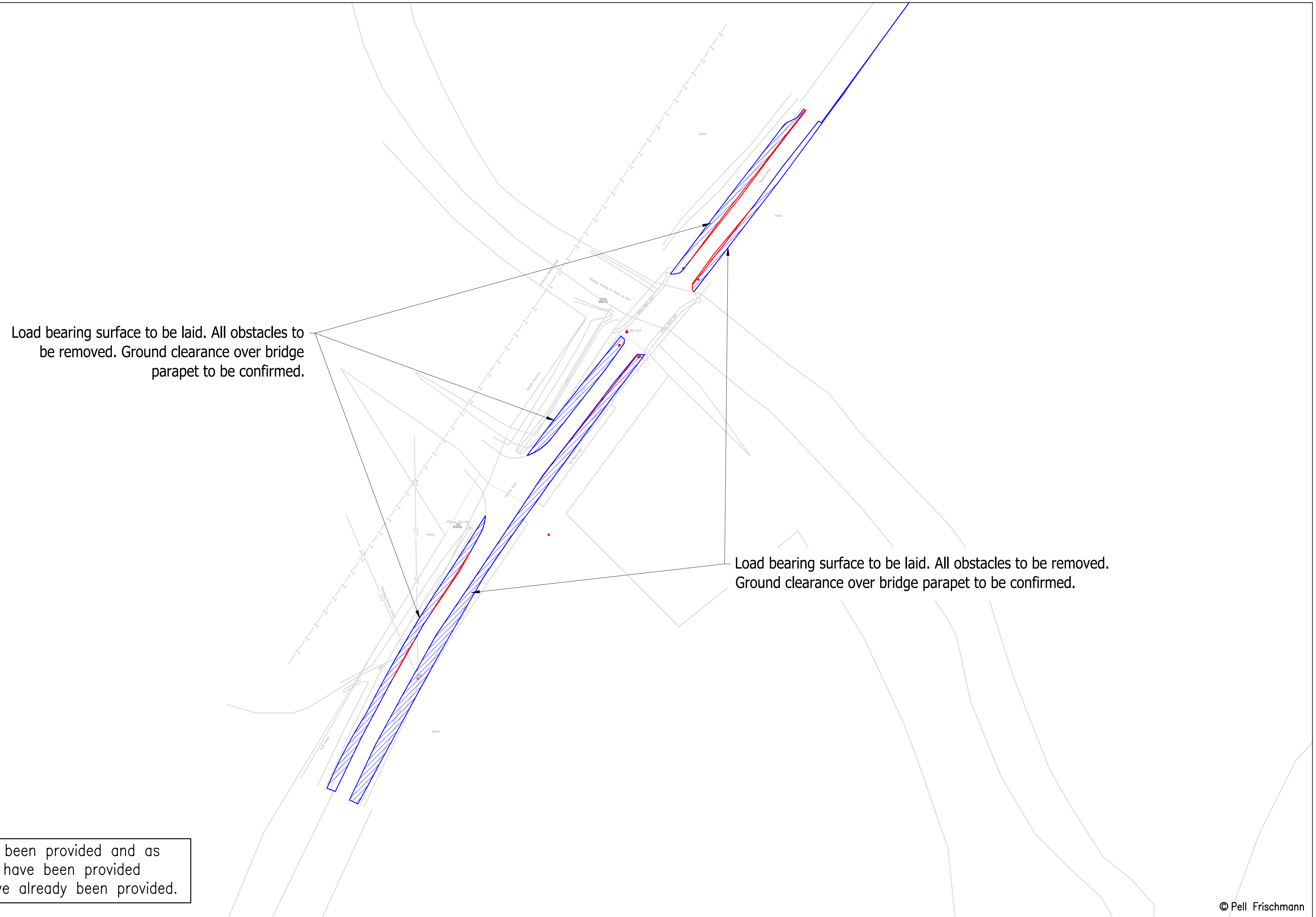
Drawing Status: Draft

Drawing No.: SK58B

Notes:
1. All mitigation is subject to confirmation through a test run.
2. This is not a construction drawing and is intended for illustration purposes only.

Revision: 1

N163 Mitigation



As built drawings have not been provided and as such indicative road edges have been provided however mitigation may have already been provided.

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www.pellfrischmann.com

Project	Appin Wind Farm		
Client	Statkraft		
Drawing Title	SG155 / N163 / SG170 Blades & 29.977 x 4.8 x 4.793 Tower		
SPA Location	Water of Ken Road Polifferie Burn		

	Name	Date
Drawn	GLJ	15/07/2022
Designed	GLJ	15/07/2022
Checked	GB	15/07/2022
Point of Interest	93	

Scale: Custom @ A3

File No. 220622 Appin Tracking [SG155 N163 SG170]_Part2 Final.dwg

Drawing Status: Draft

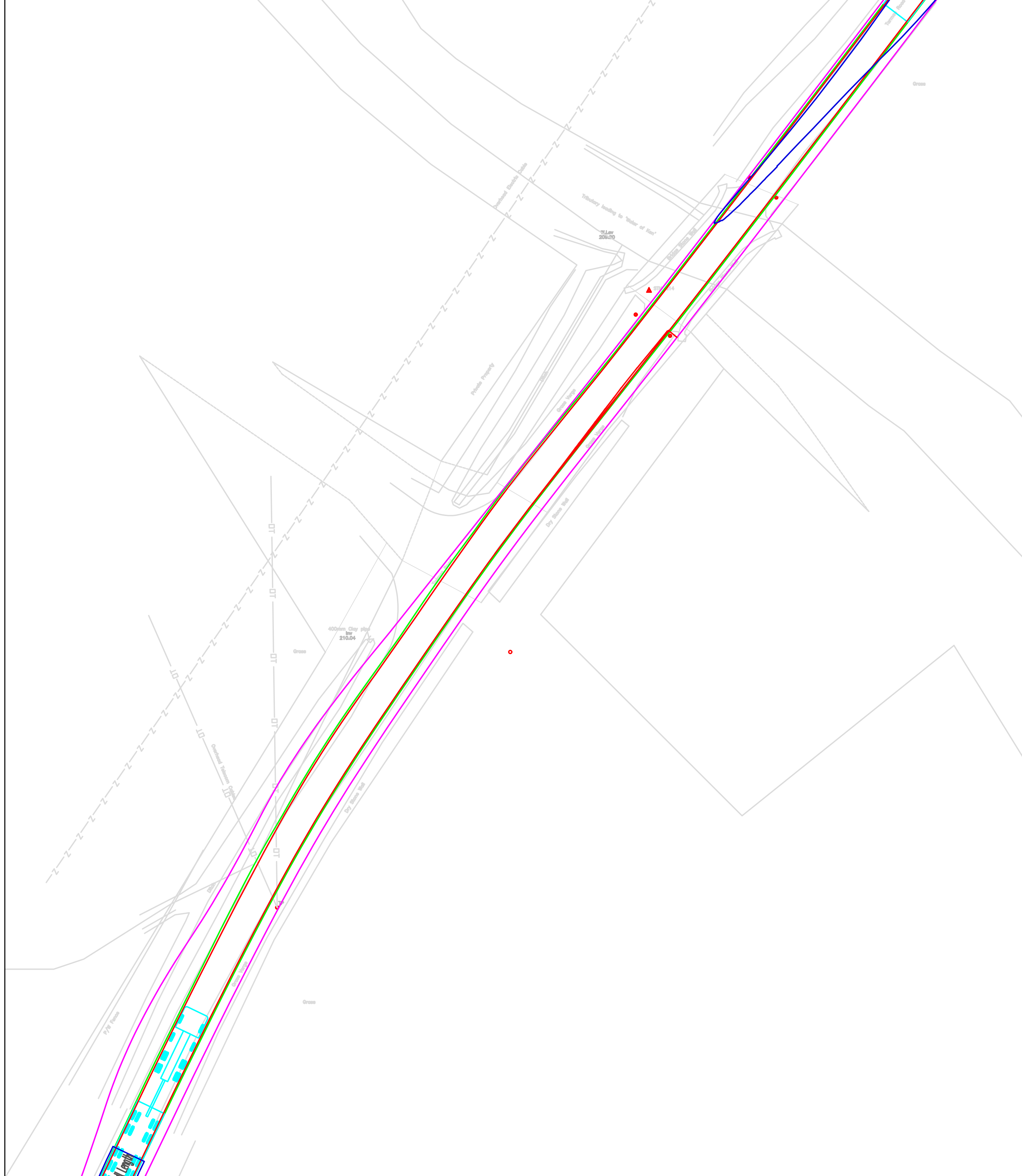
Drawing No.: SK58C

Revision: 1

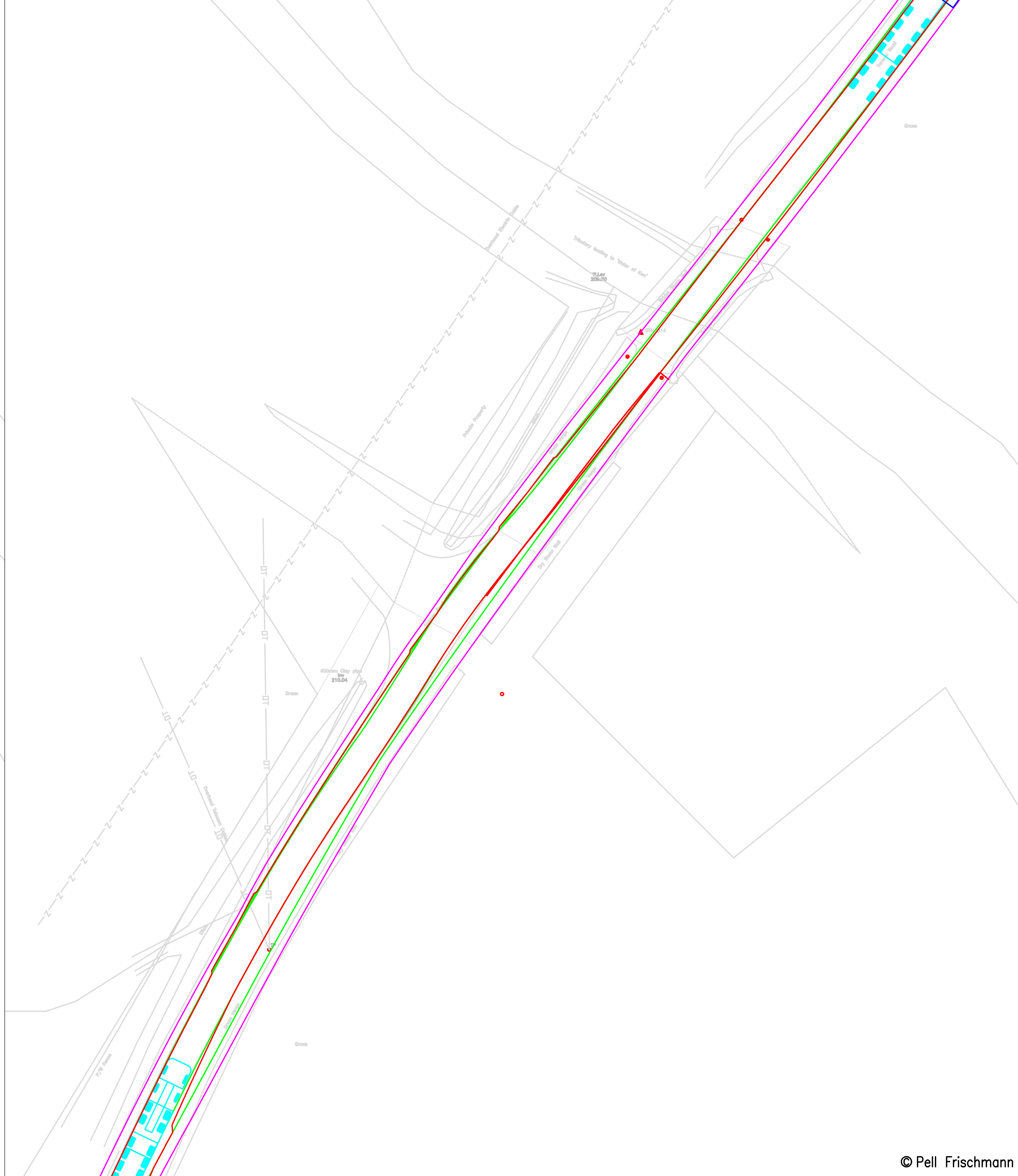
Notes:
1. All mitigation is subject to confirmation through a test run.
2. This is not a construction drawing and is intended for illustration purposes only.

Key: Wheel SPA, Body SPA, Load SPA, Indicative, Over–run, Over–sail

SG170 Blade



Tower



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Email: pfedinburgh@pellfrischmann.com
www.pellfrischmann.com

Client: Statkraft

Key: Wheel SPA | Body SPA | Load SPA | Indicative | Over-run | Over-sail

Project: Appin Wind Farm

Drawing Title: SG155 / N163 / SG170 Blades & 29.977 x 4.8 x 4.793 Tower

SPA Location: Water of Ken Road Polifferie Burn

	Name	Date
Drawn	GLJ	15/07/2022
Designed	GLJ	15/07/2022
Checked	GB	15/07/2022
Point of Interest	93	

Scale: 1:500 @ A3

File No. 220622 Appin Tracking [SG155 N163 SG170]_Part2 Final.dwg

Drawing Status: Draft

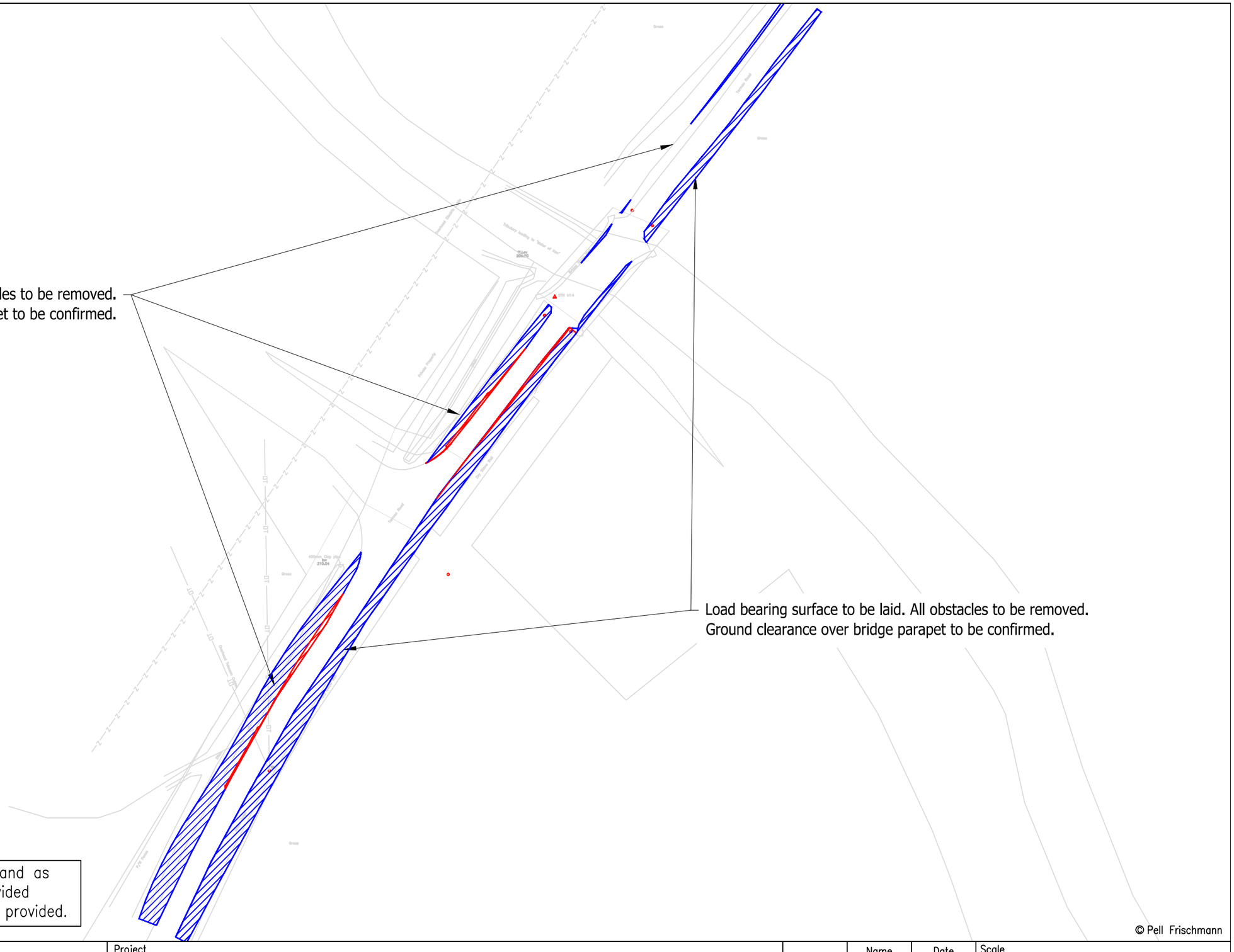
Drawing No.: SK58D

Notes:
1. All mitigation is subject to confirmation through a test run.
2. This is not a construction drawing and is intended for illustration purposes only.

Revision: 1

SG170 Mitigation

Load bearing surface to be laid. All obstacles to be removed.
Ground clearance over bridge parapet to be confirmed.



Load bearing surface to be laid. All obstacles to be removed.
Ground clearance over bridge parapet to be confirmed.

As built drawings have not been provided and as such indicative road edges have been provided however mitigation may have already been provided.

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Client: Statkraft

Key: Wheel SPA | Body SPA | Load SPA | Indicative | Over-run | Over-sail

Project: Appin Wind Farm

Drawing Title: SG155 / N163 / SG170 Blades & 29.977 x 4.8 x 4.793 Tower

SPA Location: Water of Ken Road Polifferie Burn

	Name	Date
Drawn	GLJ	15/07/2022
Designed	GLJ	15/07/2022
Checked	GB	15/07/2022
Point of Interest		93

Scale: 1:500 @ A3

File No: 220622 Appin Tracking [SG155 N163 SG170]_Part2 Final.dwg

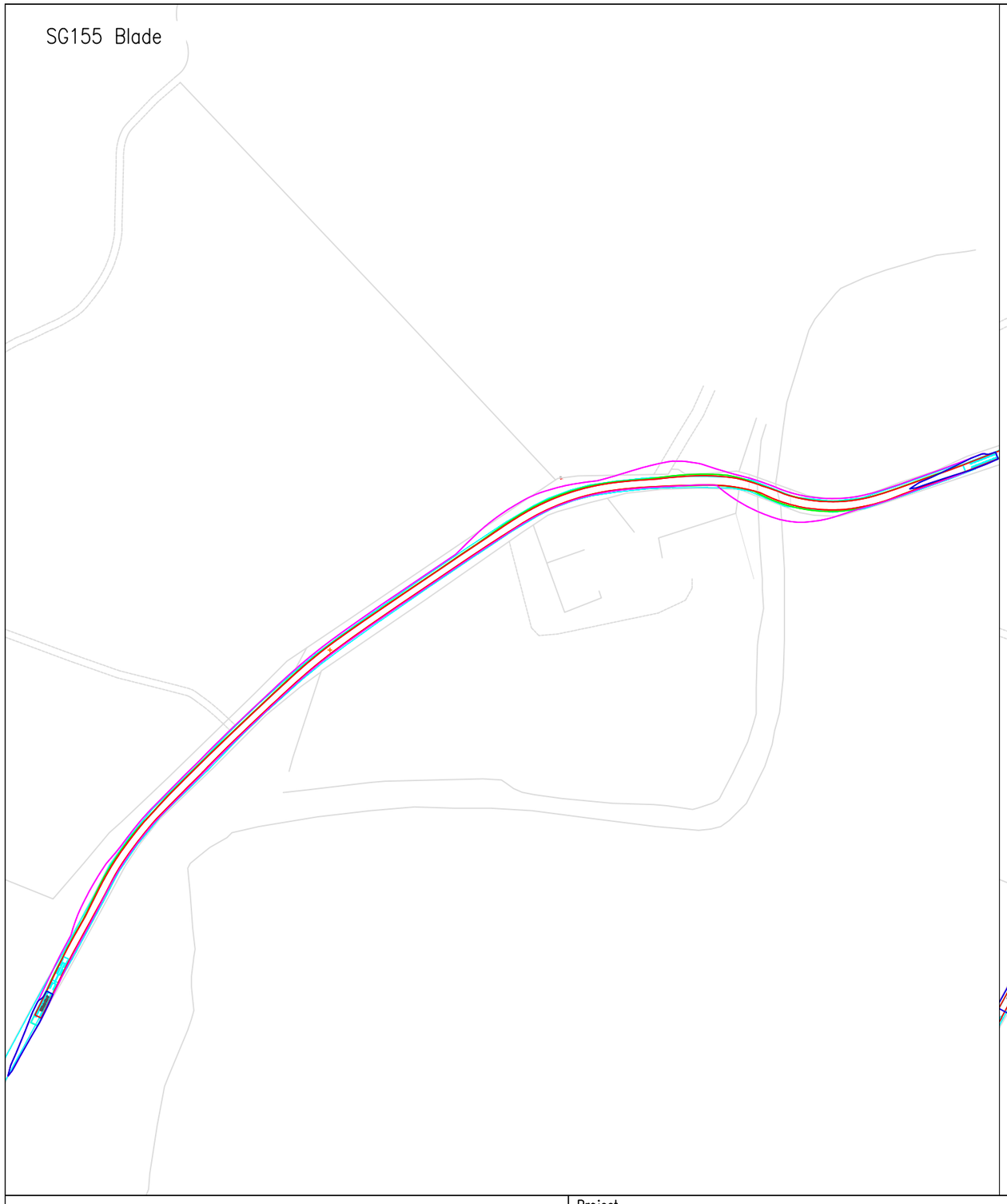
Drawing Status: Draft

Drawing No.: SK58E

Notes:
1. All mitigation is subject to confirmation through a test run.
2. This is not a construction drawing and is intended for illustration purposes only.

Revision: 1

SG155 Blade



Tower

Pell Frischmann
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Tel: +44 (0)131 240 1270
Email: pfedinburgh@pellfrischmann.com
www.pellfrischmann.com

Client: Statkraft

Key: Wheel SPA | Body SPA | Load SPA | Indicative | Over-run | Over-sail

Project: Appin Wind Farm

Drawing Title: SG155 / N163 / SG170 Blades & 29.977 x 4.8 x 4.793 Tower

SPA Location: Water of Ken Road Strahanna Bridge

	Name	Date
Drawn	GLJ	15/07/2022
Designed	GLJ	15/07/2022
Checked	GB	15/07/2022
Point of Interest		94

Scale: 1:2_1 @ A3

File No: 220622. Appin Tracking [SG155 N163 SG170]_Part2 Final.dwg

Drawing Status: Draft

Drawing No.: SK59

Notes:
1. All mitigation is subject to confirmation through a test run.
2. This is not a construction drawing and is intended for illustration purposes only.

Revision: 1

SG155 Mitigation

Load bearing surface to be laid. All obstacles and stone wall to be removed. **Third party land** required.

Road to be widened to a minimum of 4.5m.

Clearance over bridge parapets to be confirmed. All obstacles and stone wall to be removed. **Third party land** required.

Load bearing surface to be laid.

As built drawings have not been provided and as such indicative road edges have been provided however mitigation may have already been provided.

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www.pellfrischmann.com

Client: Statkraft

Key: Wheel SPA | Body SPA | Load SPA | Indicative | Over-run | Over-sail

Project: Appin Wind Farm

Drawing Title: SG155 / N163 / SG170 Blades & 29.977 x 4.8 x 4.793 Tower

SPA Location: Water of Ken Road Strahanna Bridge

	Name	Date
Drawn	GLJ	15/07/2022
Designed	GLJ	15/07/2022
Checked	GB	15/07/2022
Point of Interest		94

Scale: 1:1000 @ A3

Plot No: 220622 Appin Tracking [SG155 N163 SG170]_Part2 Final.dwg

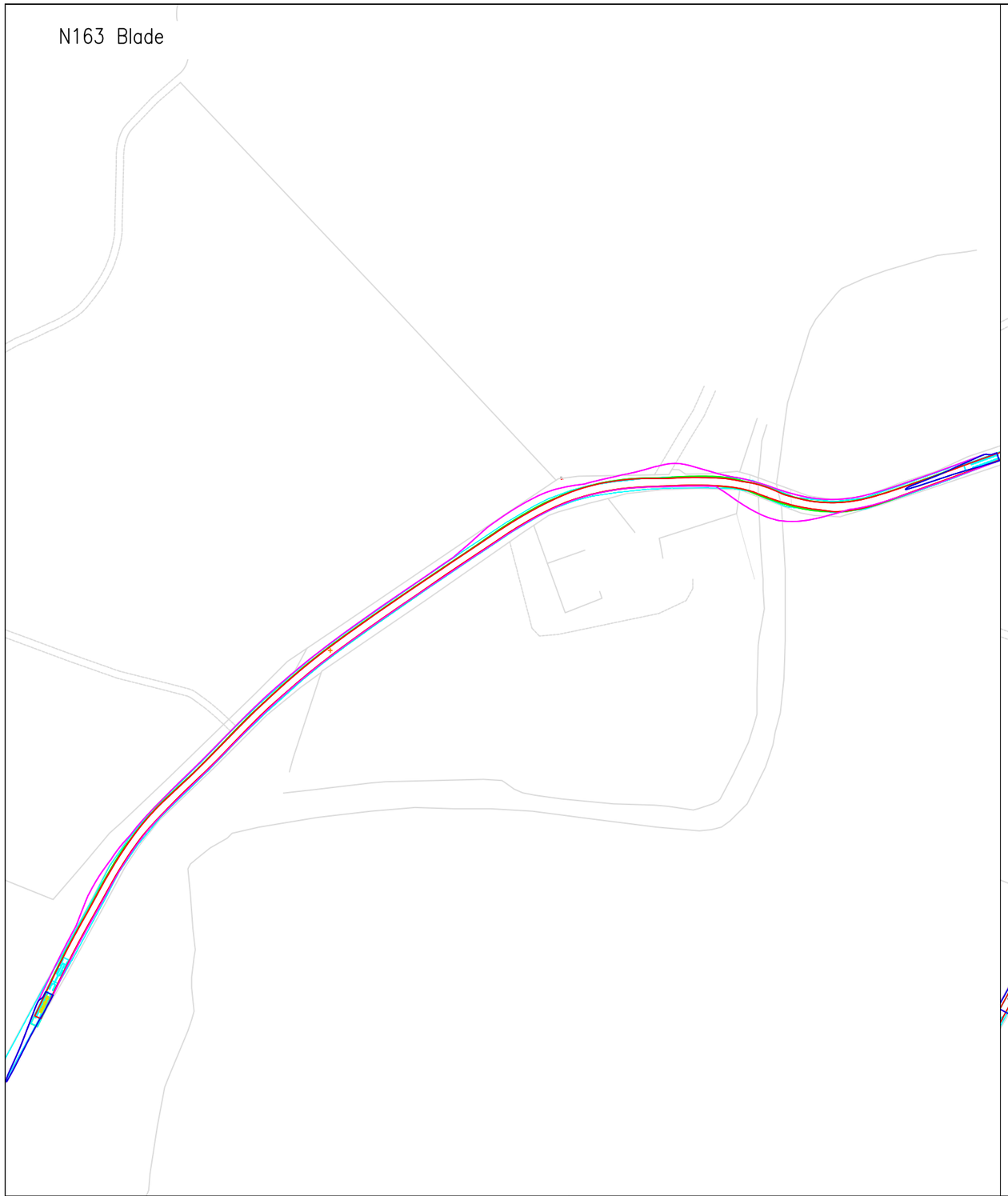
Drawing Status: Draft

Drawing No.: SK59A

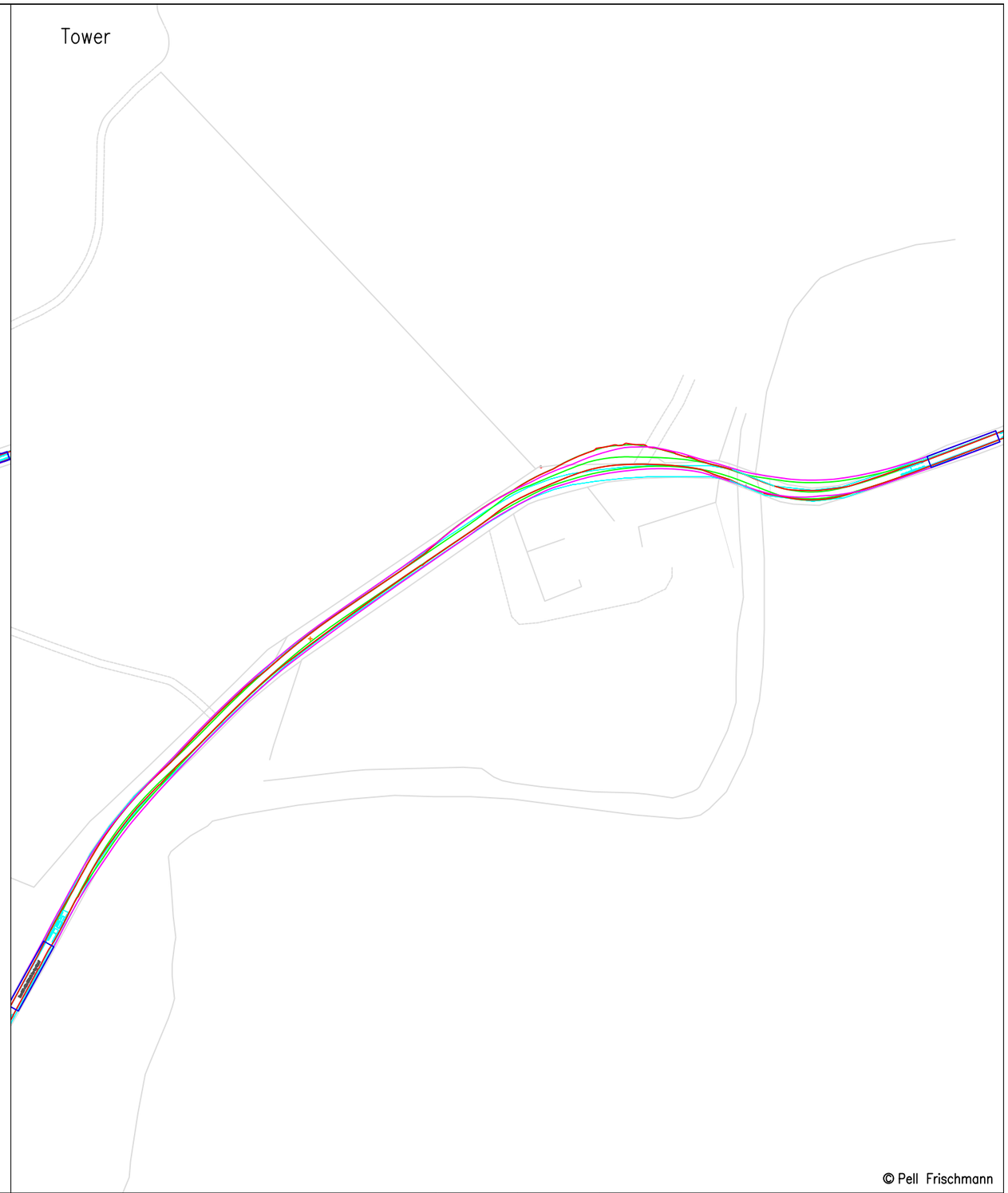
Notes:
1. All mitigation is subject to confirmation through a test run.
2. This is not a construction drawing and is intended for illustration purposes only.

Revision: 1

N163 Blade



Tower



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Email: pfedinburgh@pellfrischmann.com
www.pellfrischmann.com

Client: Statkraft

Key: Wheel SPA | Body SPA | Load SPA | Indicative | Over-run | Over-sail

Project: Appin Wind Farm

Drawing Title: SG155 / N163 / SG170 Blades & 29.977 x 4.8 x 4.793 Tower

SPA Location: Water of Ken Road Strahanna Bridge

	Name	Date
Drawn	GLJ	15/07/2022
Designed	GLJ	15/07/2022
Checked	GB	15/07/2022
Point of Interest		94

Scale: 1:2_1 @ A3

Plotted: 22622 Appin Tracking [SG155 N163 SG170]_Part2 Final.dwg

Drawing Status: Draft

Drawing No.: SK59B

Notes:
1. All mitigation is subject to confirmation through a test run.
2. This is not a construction drawing and is intended for illustration purposes only.

Revision: 1

N163 Mitigation

Load bearing surface to be laid. All obstacles and stone wall to be removed. **Third party land** required.

Road to be widened to a minimum of 4.5m.

Clearance over bridge parapets to be confirmed. All obstacles and stone wall to be removed. **Third party land** required.

As built drawings have not been provided and as such indicative road edges have been provided however mitigation may have already been provided.

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Email: pfedinburgh@pellfrischmann.com
www.pellfrischmann.com

Client: Statkraft

Key: Wheel SPA; Body SPA; Load SPA; Indicative; Over-run; Over-sail

Project: Appin Wind Farm

Drawing Title: SG155 / N163 / SG170 Blades & 29.977 x 4.8 x 4.793 Tower

SPA Location: Water of Ken Road Strahanna Bridge

	Name	Date
Drawn	GLJ	15/07/2022
Designed	GLJ	15/07/2022
Checked	GB	15/07/2022
Point of Interest		94

Scale: 1:1000 @ A3

File No: 220622 Appin Tracking [SG155 N163 SG170]_Part2 Final.dwg

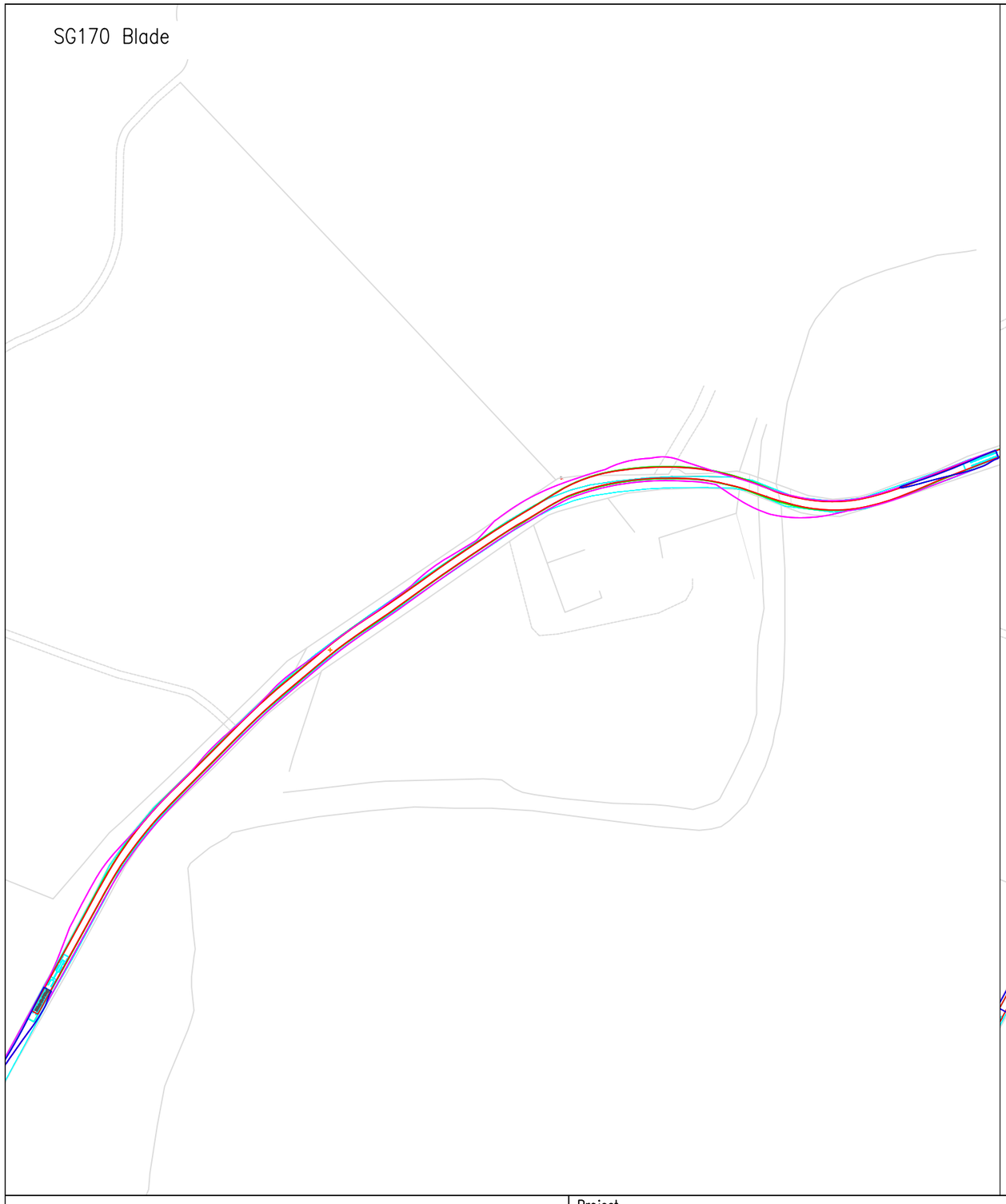
Drawing Status: Draft

Drawing No.: SK59C

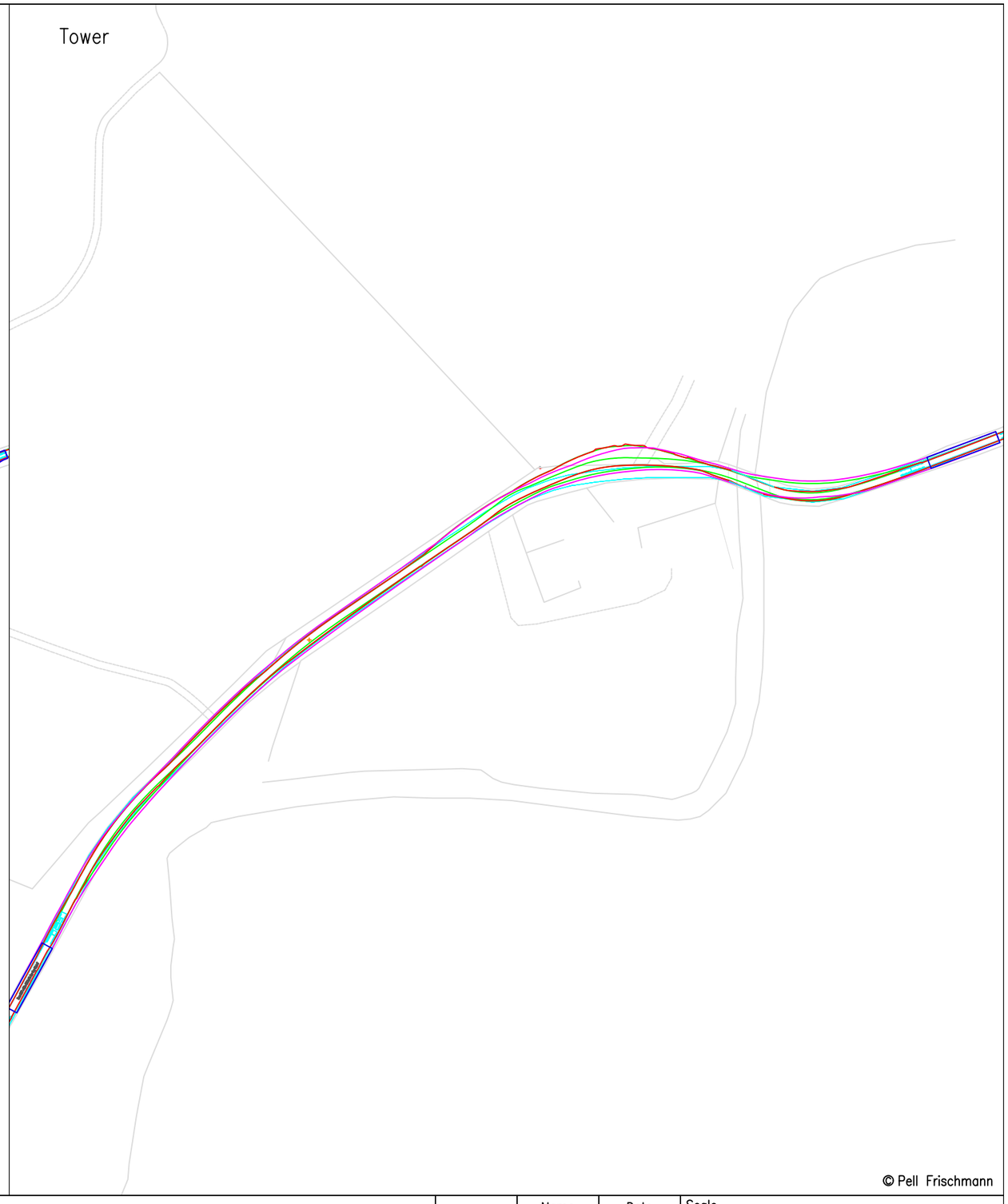
Notes:
1. All mitigation is subject to confirmation through a test run.
2. This is not a construction drawing and is intended for illustration purposes only.

Revision: 1

SG170 Blade



Tower



Pell Frischmann
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Tel: +44 (0)131 240 1270
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www.pellfrischmann.com

Client: Statkraft

Key: Wheel SPA | Body SPA | Load SPA | Indicative | Over-run | Over-sail

Project: Appin Wind Farm

Drawing Title: SG155 / N163 / SG170 Blades & 29.977 x 4.8 x 4.793 Tower

SPA Location: Water of Ken Road Strahanna Bridge

	Name	Date
Drawn	GLJ	15/07/2022
Designed	GLJ	15/07/2022
Checked	GB	15/07/2022
Point of Interest		94

Scale: 1:2_1 @ A3

File No: 220622. Appin Tracking [SG155 N163 SG170]_Part2 Final.dwg

Drawing Status: Draft

Drawing No.: SK59D

Notes:
1. All mitigation is subject to confirmation through a test run.
2. This is not a construction drawing and is intended for illustration purposes only.

Revision: 1

SG170 Mitigation

Load bearing surface to be laid. All obstacles and stone wall to be removed. **Third party land** required.

Road to be widened to a minimum of 4.5m.

Clearance over bridge parapets to be confirmed. All obstacles and stone wall to be removed. **Third party land** required.

As built drawings have not been provided and as such indicative road edges have been provided however mitigation may have already been provided.

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www.pellfrischmann.com

Client: Statkraft

Key: Wheel SPA | Body SPA | Load SPA | Indicative | Over-run | Over-sail

Project: Appin Wind Farm

Drawing Title: SG155 / N163 / SG170 Blades & 29.977 x 4.8 x 4.793 Tower

SPA Location: Water of Ken Road Strahanna Bridge

	Name	Date
Drawn	GLJ	15/07/2022
Designed	GLJ	15/07/2022
Checked	GB	15/07/2022
Point of Interest		94

Scale: 1:1000 @ A3

File No: 220622 Appin Tracking [SG155 N163 SG170]_Part2 Final.dwg

Drawing Status: Draft

Drawing No.: SK59E

Notes:
1. All mitigation is subject to confirmation through a test run.
2. This is not a construction drawing and is intended for illustration purposes only.

Revision: 1

Appendix C ESDAL Correspondence

[redacted]

From: Paul.Winn@transport.gov.scot
Sent: 28 April 2021 16:07
To: Jordan Stirrat
Subject: RE: Appin Wind Farm ESDAL

Hi

We would prefer Ayr to be used for both the blades and towers but if this is not possible we would be OK for KGV to be used.

Regards
Paul

Paul Winn
Network Administrator
Administration Team
Roads Directorate
[redacted]
transport.gov.scot

I normally work from Monday to Wednesday

Transport Scotland, Buchanan House, 58 Port Dundas Road, Glasgow, G4 0HF

Transport Scotland, the national transport agency
Còmhdhail Alba, buidheann nàiseanta na còmhdhail

Strike it Out: preventing bridge strikes

- Plan your route to avoid low bridges www.freightscotland.org/lowbridges or 0800 028 1414

Do not rely upon SAT NAV – it may not hold accurate bridge height information.

From: Jordan Stirrat <JStirrat@pellfrischmann.com>
Sent: 28 April 2021 15:57
To: abnormalloadscontact@networkrail.co.uk; rsgbrb@jacobs.com; SCAbnormal.Loads@scottishcanals.co.uk; abloads@ayrshireroadsalliance.org; Winn P (Paul) <Paul.Winn@transport.gov.scot>; esdal@dumgal.gov.uk; OSDAbnormalLoadsScotland@scotland.pnn.police.uk; abnormalloadrouting@scotlandtranserv.co.uk; abnormalloads@glasgow.gov.uk; m8dbfo.abloads@amey.co.uk; M77DBFOAbnormalLoads@balfourbeatty.com
Subject: Appin Wind Farm ESDAL

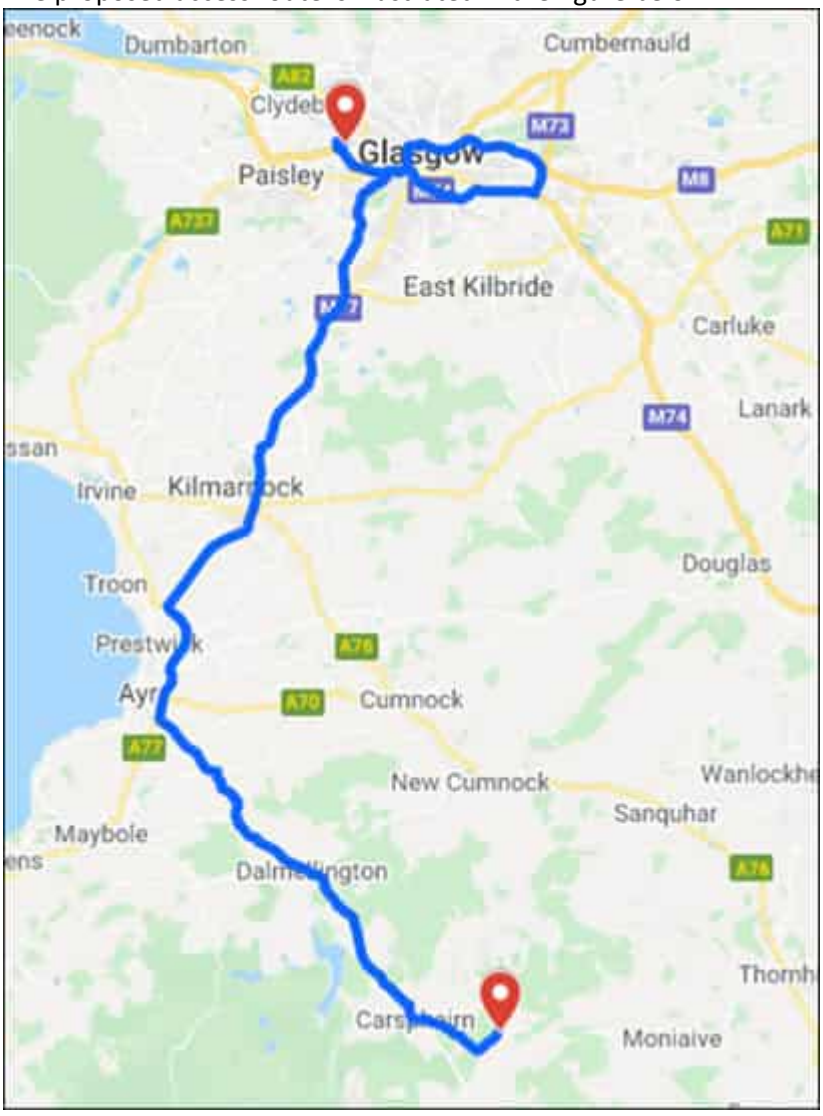
Dear All

We have been commissioned to undertake a route review for the proposed Appin Wind Farm, located to the west of Auchenbrack, Thornhill. The proposed Port of Entry is in Glasgow for blade loads and Ayr for towers.

The proposed access route to site is as follows:

- Loads would depart KGV Dock and travel west on Kings Inch Drive before turning left onto Mayo Avenue;
- Loads would join the eastbound M8 and continue to Junction 8;
- Loads would leave the M8 and join the M73 travelling south;
- At Junction 4, loads would join the westbound M74;
- Loads would depart the M74 at Junction 1 and join the M8 westbound before leaving at Junction 22 and join the M77 travelling southbound;
- Loads would continue southbound on the M77 / A77 until Bankfield Roundabout south of Ayr, where they would turn left onto the A713;
- Loads would proceed southbound on the A713 to the south of Carsphairn, where they would turn left onto the B729; and
- Loads would proceed southeast on the B729. At the junction with the Lorg Forest road, loads would turn north and would continue through to the site access junction.

The proposed access route is illustrated in the figure below:



The proposed tower access route is as follows:

- Loads would depart the Port of Ayr and continue east on Waggon Road;
- Loads would turn right onto Allison Street and then left onto Whitletts Road; and
- Loads would continue east on Whitletts Roundabout where they would turn right onto the A77 and join the main route.

The proposed tower route is illustrated in the figure below:

The maximum axle load is 12tonnes, with the gross vehicle weight for the heaviest load expected to be in the region of 130tonnes. The maximum height is 4.9m, with the widest load at 4.8m. The longest loads will have a rigid length of 76m. The assessment is at an early stage at present, however I would be grateful if you could confirm if there are any structures along the route that may present a particular issue. A further, more detailed assessment will be undertaken once the turbine haulier and turbine model have been selected by the developer.

Kind regards,
Jordan

Jordan Stirrat
Assistant Engineer
93 George Street
Edinburgh
EH2 3ES [redacted]
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www.pellfrischmann.com
CORONAVIRUS (COVID 19): In order to protect our colleagues, we have temporarily closed our offices until it is confirmed by the government that it is safe to re-open.
Further information can be found **HERE**.

From: SC Abnormal Loads <SCAbnormal.Loads@scottishcanals.co.uk>
Sent: 29 April 2021 21:17
To: Jordan Stirrat
Subject: RE: Appin Wind Farm ESDAL

Good evening,

No Scottish Canals structures affected.

Thanks,
Brian.

From: Jordan Stirrat <JStirrat@pellfrischmann.com>
Sent: 28 April 2021 15:57
To: abnormalloadscontact@networkrail.co.uk; rsgbrb@jacobs.com; SC Abnormal Loads <SCAbnormal.Loads@scottishcanals.co.uk>; abloads@ayrshireroadsalliance.org; Paul.Winn@transport.gov.scot; esdal@dumgal.gov.uk; OSDAbnormalLoadsScotland@scotland.pnn.police.uk; abnormalloadrouting@scotlandtranserv.co.uk; abnormalloads@glasgow.gov.uk; m8dbfo.abloads@amey.co.uk; M77DBFOAbnormalLoads@balfourbeatty.com
Subject: Appin Wind Farm ESDAL

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The proposed access route to site is as follows:

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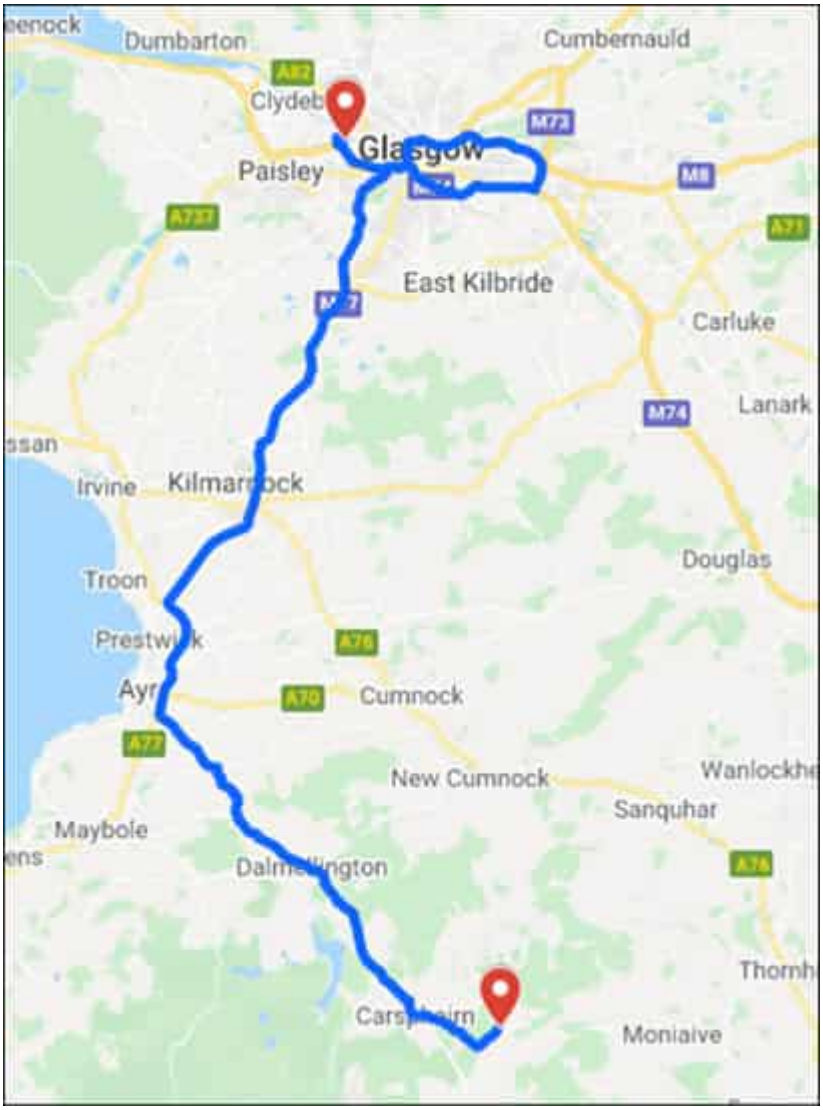
- Loads would join the eastbound M8 and continue to Junction 8;
- Loads would leave the M8 and join the M73 travelling south;
- At Junction 4, loads would join the westbound M74;
- Loads would depart the M74 at Junction 1 and join the M8 westbound before leaving at Junction 22 and join the M77 travelling southbound;
- Loads would continue southbound on the M77 / A77 until Bankfield Roundabout south of Ayr, where they would turn left onto the A713;
- Loads would proceed southbound on the A713 to the south of Carsphairn, where they would turn left onto the B729; and
- Loads would proceed southeast on the B729. At the junction with the Lorg Forest road, loads would turn north and would continue through to the site access junction.

The proposed access route is illustrated in the figure below:



The proposed tower access route is as follows:

- Loads would depart the Port of Ayr and continue east on Waggon Road;
- Loads would turn right onto Allison Street and then left onto Whitletts Road; and
- Loads would continue east on Whitletts Road to Whitletts Roundabout where they would turn right onto the A77 and join the main route.

The proposed tower route is illustrated in the figure below:

The maximum axle load is 12tonnes, with the gross vehicle weight for the heaviest load expected to be in the region of 130tonnes. The maximum height is 4.9m, with the widest load at 4.8m. The longest loads will have a rigid length of 76m. The assessment is at an early stage at present, however I would be grateful if you could confirm if there are any structures along the route that may present a particular issue. A further, more detailed assessment will be undertaken once the turbine haulier and turbine model have been selected by the developer.

Kind regards,
Jordan

Jordan Stirrat
Assistant Engineer
93 George Street
Edinburgh
EH2 3ES [redacted]
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CORONAVIRUS (COVID 19): In order to protect our colleagues, we have temporarily closed our offices until it is confirmed by the government that it is safe to re-open.
Further information can be found **HERE**.

[redacted]

From: OSD Abnormal Loads Scotland <OSDAbnormalLoadsScotland@scotland.pnn.police.uk>
Sent: 29 April 2021 10:05
To: Jordan Stirrat
Subject: RE: Appin Wind Farm ESDAL [OFFICIAL]

OFFICIAL

Good Morning,

In response to your email enquiry dated 28th April 2021, I can provide the following information on behalf of Police Scotland.

When a haulier has been selected for a particular project and they have been furnished with precise dimensions of the load to be transported by road, thereafter as part of the planning process a detailed route survey is produced by the haulier identifying all potential issues often referred to as “pinch points” along the entire proposed route. The route is then examined and commented upon by Transport Scotland /Transerv and the relevant Local Council amongst other partners.

Police Scotland consider the proposed route primarily from a road safety perspective .If due to the abnormal dimensions it is apparent other road users will be required to be directed to stop along the route by police in order to safely facilitate the movement or encroachment into an opposing undivided carriageway will occur, then police officers will be deployed to warn other road users of the presence of the abnormal load. The timings of the movements are dependent on many factors dependant on the route and Transport Scotland may place restrictions on travel during peak times to ensure journey time reliability along their trunk road network.

In general terms the movement of Abnormal Indivisible Loads (A.I.L) along most if not all routes in more rural areas, from my experience has an impact on the infrastructure of the general area and local community although Police Scotland are not best placed to comment in detail on this subject. Examples of this from previous projects could include, delays to freight traffic travelling to or from ferry ports, delays experienced by bus services including tourist bus tours operated in the area (Invergordon Port being a cruise ship port), delays to teachers and or pupils attending for scheduled school start times and delays to staff and the public attending hospital or medical appointments.

Regards

Frankie Anderson
Business Support Administrator
Vehicle Recovery & Abnormal Loads
Police Scotland
Fife Divisional HQ
Detroit Road
Glenrothes
Fife
KY6 2RJ

[redacted]**(not monitored 24/7 if no response call 101 or send email)**

Email: OSDAbnormalLoadsScotland@scotland.pnn.police.uk

Website: http://www.scotland.police.uk/
Twitter: @policescotland
Facebook: www.facebook.com/policescotland

It is the responsibility of the Haulier to check for any roadworks that affect your route as there may be planned or emergency works

A7 Hawick. Due to ongoing repairs and investigations on the A7 at Hawick, this route is not suitable to any Abnormal Load of 3.2m or wider. There are no holding points suitable within the vacinity and Hauliers are to review their route and avoid this section of the journey. Works are currently due to be completed 16 Apr 2021.

*****A83 – Rest and be Thankful & OMR (Old Military Road) Diversion. Due to ongoing repairs and investigations on the A83 at the Rest and be Thankful, this route is not suitable to any Abnormal Load of 2.9m or wider. Hauliers are to review their route and avoid this section of the journey. *****

A9 Luncarty to Birnam – A 3m width restriction is in place through the roadworks from 5 Feb 19 until further notice. All abnormal Loads that exceed 3m are to pull into the designated wide load holding bays and are to contact 07525 838 026, to await to be escorted through the roadworks by the Traffic Management Team. Any Haulier not adhering to this notice could be committing a Road Traffic Offence and could be reported to the Procurator Fiscal and Traffic Commissioner.

From: Jordan Stirrat [mailto:JStirrat@pellfrischmann.com]
Sent: 28 April 2021 15:57
To: abnormalloadscontact@networkrail.co.uk; rsgbrb@jacobs.com; SCAbnormal.Loads@scottishcanals.co.uk; abloads@ayrshireroadsalliance.org; Paul.Winn@transport.gov.scot; esdal@dumgal.gov.uk; OSD Abnormal Loads Scotland; abnormalloadrouting@scotlandtranserv.co.uk; abnormalloads@glasgow.gov.uk; m8dbfo.abloads@amey.co.uk; M77DBFOAbnormalLoads@balfourbeatty.com
Subject: Appin Wind Farm ESDAL

Dear All

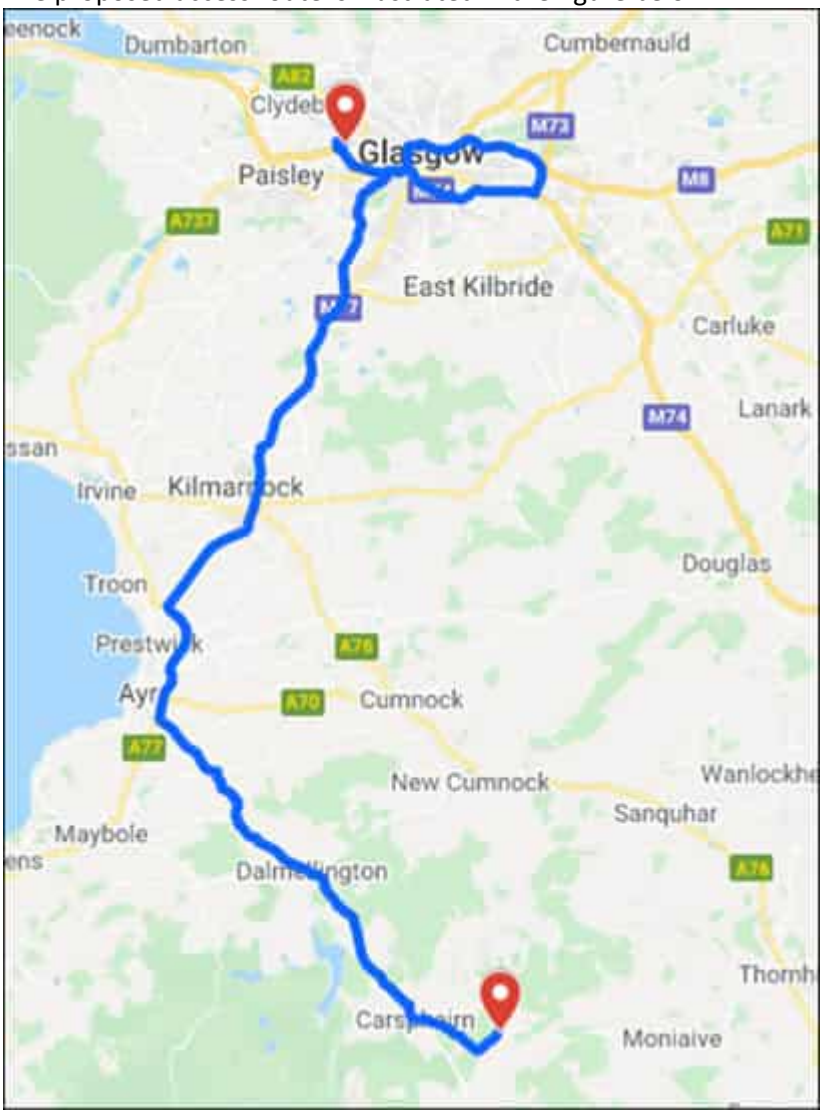
We have been commissioned to undertake a route review for the proposed Appin Wind Farm, located to the west of Auchenbrack, Thornhill. The proposed Port of Entry is in Glasgow for blade loads and Ayr for towers.

The proposed access route to site is as follows:

- Loads would depart KGV Dock and travel west on Kings Inch Drive before turning left onto Mayo Avenue;
- Loads would join the eastbound M8 and continue to Junction 8;
- Loads would leave the M8 and join the M73 travelling south;
- At Junction 4, loads would join the westbound M74;
- Loads would depart the M74 at Junction 1 and join the M8 westbound before leaving at Junction 22 and join the M77 travelling southbound;
- Loads would continue southbound on the M77 / A77 until Bankfield Roundabout south of Ayr, where they would turn left onto the A713;

- Loads would proceed southbound on the A713 to the south of Carsphairn, where they would turn left onto the B729; and
- Loads would proceed southeast on the B729. At the junction with the Lorg Forest road, loads would turn north and would continue through to the site access junction.

The proposed access route is illustrated in the figure below:



The proposed tower access route is as follows:

- Loads would depart the Port of Ayr and continue east on Waggon Road;
- Loads would turn right onto Allison Street and then left onto Whitletts Road; and
- Loads would continue east on Whitletts Road to Whitletts Roundabout where they would turn right onto the A77 and join the main route.

The proposed tower route is illustrated in the figure below:

The maximum axle load is 12tonnes, with the gross vehicle weight for the heaviest load expected to be in the region of 130tonnes. The maximum height is 4.9m, with the widest load at 4.8m. The longest loads will have a rigid length of 76m. The assessment is at an early stage at present, however I would be grateful if you could confirm if there are any structures along the route that may present a particular issue. A further, more detailed assessment will be undertaken once the turbine haulier and turbine model have been selected by the developer.

Kind regards,
Jordan

Jordan Stirrat
Assistant Engineer
93 George Street
Edinburgh
EH2 3ES [redacted]
Pell Frischmann
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www.pellfrischmann.com
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Further information can be found **HERE**.

[redacted]

From: M8DBFO Abloads <M8DBFOAbloads@amey.co.uk>
Sent: 23 July 2021 15:01
To: Tim Lockett
Cc: M8DBFO Abloads
Subject: RE: Potential Impact on Infrastructure - Appin

Importance: High

Commenting on behalf of Scottish Roads Partnership which is responsible for only the following section of the route.

M8 J10 to J8, M73 J2 to J1 and M74 J4 to J3A

There are no issues with your proposed movements on this part of the route.

Regards

Iain Franklin BSc. Hons C.Eng. MICE MCIHT
Principal Engineer | Structures | Amey Consulting

[redacted] | **e:** iain.franklin@amey.co.uk
Amey | Precision house | McNeil Drive | Motherwell | ML1 4UR

amey consulting

Personal pride in our public service | EMPOWER | ENGAGE | EXCEL

From: Tim Lockett <TLockett@pellfrischmann.com>
Sent: 23 July 2021 14:52
To: abnormalloadscontact@networkrail.co.uk; rsgbrb@jacobs.com; SCAbnormal.Loads@scottishcanals.co.uk; abloads@ayrshireroadsalliance.org; paul.winn@transport.gov.scot; esdal@dumgal.gov.uk; OSDAbnormalLoadsScotland@scotland.pnn.police.uk; abnormalloadrouting@scotlandtranserv.co.uk; abnormalloads@glasgow.gov.uk; M8DBFO Abloads <M8DBFOAbloads@amey.co.uk>; M77DBFOAbnormalLoads@balfourbeatty.com
Subject: Potential Impact on Infrastructure - Appin

Dear Sir / Madam

We have been commissioned to undertake a route review for a proposed wind farm site located to the west of Auchenbrack, Thornhill.

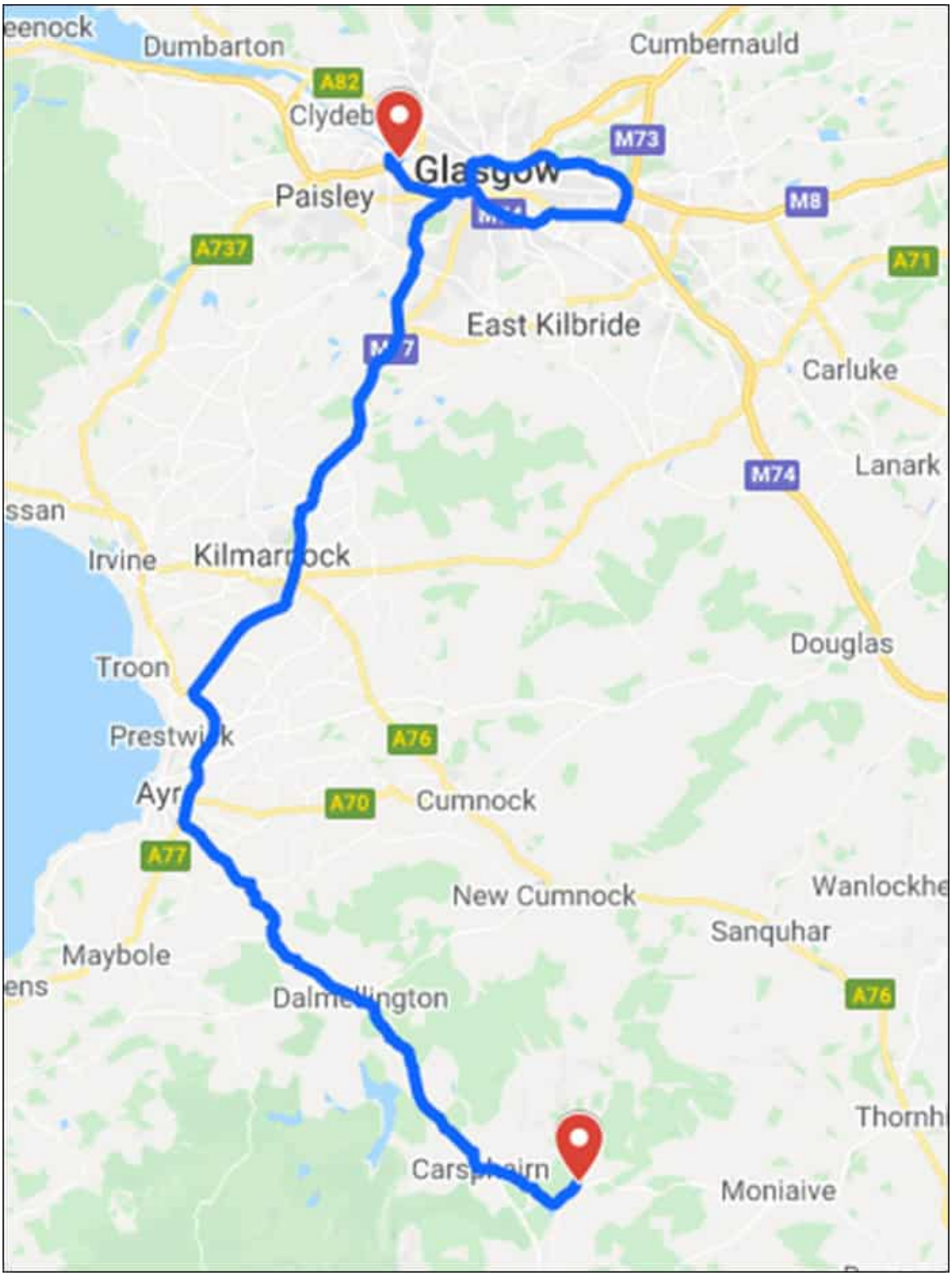
The proposed blade access route to site is as follows:

- Loads would depart KGV Dock and travel west on Kings Inch Drive before turning left onto Mayo Avenue;

- Loads would join the eastbound M8 and continue to Junction 8;
- Loads would leave the M8 and join the M73 travelling south;
- At Junction 4, loads would join the westbound M74;
- Loads would depart the M74 at Junction 1 and join the M8 westbound before leaving at Junction 22 and join the M77 travelling southbound;
- Loads would continue southbound on the M77 / A77 until Bankfield Roundabout south of Ayr, where they would turn left onto the A713;
- Loads would proceed southbound on the A713 to the south of Carsphairn, where they would turn left onto the B729; and
- Loads would proceed southeast on the B729. At the junction with the Lorg Forest road, loads would turn north and would continue through to the site access junction.

The proposed access route is illustrated in Figure 4.

Figure 4: Proposed Access Route



The proposed tower access route is as follows;

- Loads would depart the Port of Ayr and continue east on Waggon Road;
- Loads would turn right onto Allison Street and then left onto Whitletts Road; and
- Loads would continue east on Whitletts Road to Whitletts Roundabout where they would turn right onto the A77 and join the main route.

The proposed access route is illustrated in Figure 5.

Figure 5: Proposed Tower Access Route

The maximum axle load is 12tonnes, with the gross vehicle weight for the heaviest load expected to be in the region of 140 tonnes. The maximum height is 4.9m, with the widest load at 4.8m. The longest loads will have a rigid length of 76m. The assessment is at an early stage at present, however I would be grateful if you could confirm if there are any structures along the route that may present a particular issue. A further, more detailed assessment will be undertaken once the turbine haulier and turbine model have been selected by the developer.

Kind regards,

Tim

Timothy Lockett
Principal Transport Consultant
93 George Street
Edinburgh [redacted]
EH2 3ES
Pell Frischmann
Excellence through innovation
www.pellfrischmann.com

[redacted]

From: M8DBFO Abloads <M8DBFOAbloads@amey.co.uk>
Sent: 28 April 2021 17:02
To: Jordan Stirrat
Cc: M8DBFO Abloads
Subject: RE: Appin Wind Farm ESDAL

Importance: High

On behalf of Scottish Roads Partnership

We have no issues with your proposed route in our area which comprises of;
M8 J10 to J8
M73 J2 to J1
M74 J4 to J3A

Regards

Iain Franklin
Principal Project Manager | M8 DBFO | Transport Infrastructure
[redacted] | e: iain.franklin@amey.co.uk
Amey | Bargeddie Office | Langmuir Road | Bargeddie | G69 7TU

From: Jordan Stirrat <JStirrat@pellfrischmann.com>
Sent: 28 April 2021 15:57
To: abnormalloadscontact@networkrail.co.uk; rsgbrb@jacobs.com; SCAbnormal.Loads@scottishcanals.co.uk; abloads@ayrshireroadsalliance.org; Paul.Winn@transport.gov.scot; esdal@dumgal.gov.uk; OSDAbnormalLoadsScotland@scotland.pnn.police.uk; abnormalloadrouting@scotlandtranserv.co.uk; abnormalloads@glasgow.gov.uk; M8DBFO Abloads <M8DBFOAbloads@amey.co.uk>; M77DBFOAbnormalLoads@balfourbeatty.com
Subject: Appin Wind Farm ESDAL

Dear All

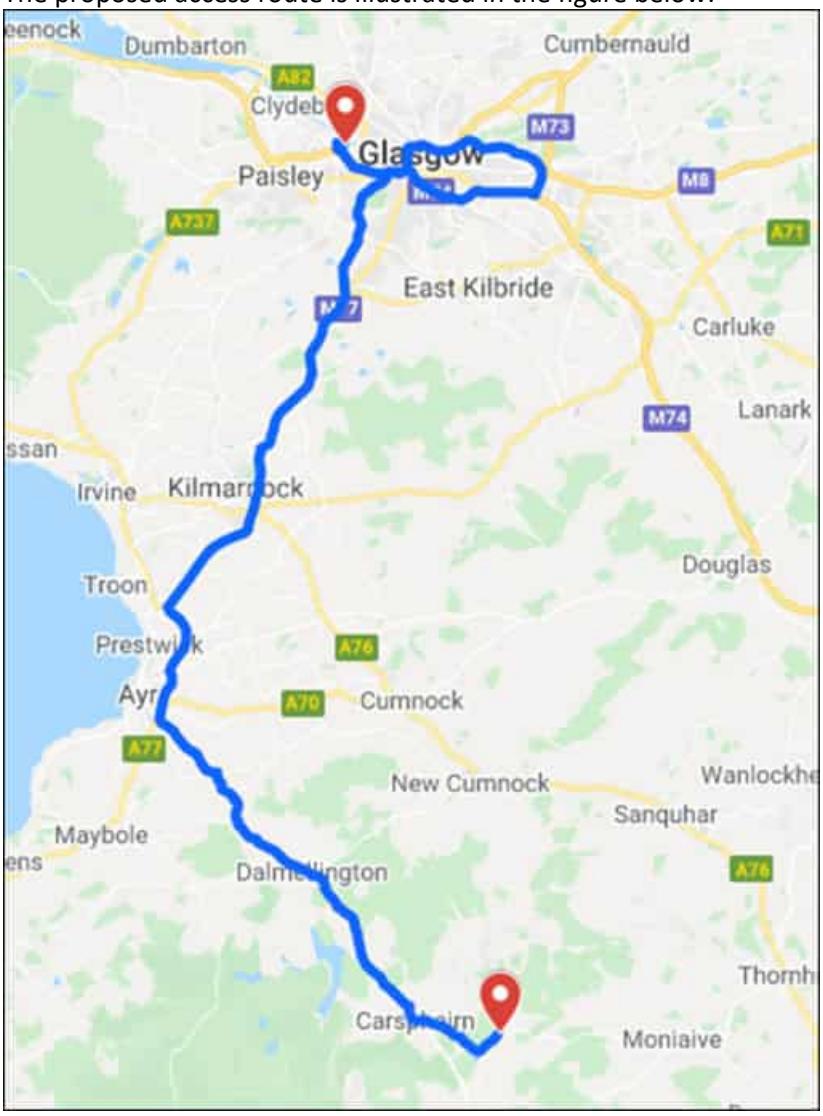
We have been commissioned to undertake a route review for the proposed Appin Wind Farm, located to the west of Auchenbrack, Thornhill. The proposed Port of Entry is in Glasgow for blade loads and Ayr for towers.

The proposed access route to site is as follows:

- Loads would depart KGV Dock and travel west on Kings Inch Drive before turning left onto Mayo Avenue;
- Loads would join the eastbound M8 and continue to Junction 8;
- Loads would leave the M8 and join the M73 travelling south;
- At Junction 4, loads would join the westbound M74;
- Loads would depart the M74 at Junction 1 and join the M8 westbound before leaving at Junction 22 and join the M77 travelling southbound;

- Loads would continue southbound on the M77 / A77 until Bankfield Roundabout south of Ayr, where they would turn left onto the A713;
- Loads would proceed southbound on the A713 to the south of Carsphairn, where they would turn left onto the B729; and
- Loads would proceed southeast on the B729. At the junction with the Lorg Forest road, loads would turn north and would continue through to the site access junction.

The proposed access route is illustrated in the figure below:



The proposed tower access route is as follows:

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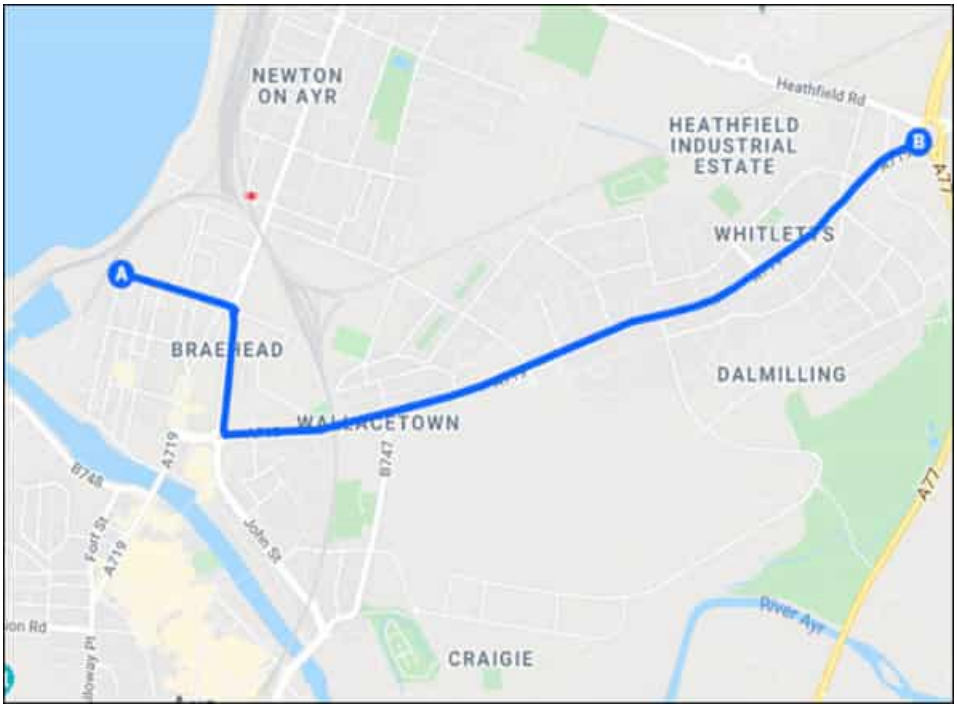
- Loads would turn right onto Allison Street and then left onto Whitletts Road; and
- Loads would continue east on Whitletts Road to Whitletts Roundabout where they would turn right onto the A77 and join the main route.

The proposed tower route is illustrated in the figure below:



The maximum axle load is 12tonnes, with the gross vehicle weight for the heaviest load expected to be in the region of 130tonnes. The maximum height is 4.9m, with the widest load at 4.8m. The longest loads will have a rigid length of 76m. The assessment is at an early stage at present, however I would be grateful if you could confirm if there are any structures along the route that may present a particular issue. A further, more detailed assessment will be undertaken once the turbine haulier and turbine model have been selected by the developer.

Kind regards,
Jordan

Jordan Stirrat
Assistant Engineer
93 George Street
Edinburgh
EH2 3ES [redacted]

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Further information can be found **HERE**.

[redacted]

From: rsgbrb <rsgbrb@jacobs.com>
Sent: 29 April 2021 14:14
To: Jordan Stirrat
Subject: RE: Appin Wind Farm ESDAL

Dear Jordan,

Thank you for your enquiry.

I have assessed the routes on behalf of Highways England Historical Railways Estate, and can confirm that no structures belonging to that authority will be affected by either.

Regards
Tania

Tania Howell
Abnormal Loads Officer (on behalf of **Highways England Historical Railways Estate**)
Jacobs
DDI: [redacted]

If your mail concerns abnormal load movements, please reply to RSGBRB@jacobs.com

From: Jordan Stirrat <JStirrat@pellfrischmann.com>
Sent: 28 April 2021 15:57
To: abnormalloadscontact@networkrail.co.uk; rsgbrb <rsgbrb@jacobs.com>; SCAbnormal.Loads@scottishcanals.co.uk; abloads@ayrshireroadsalliance.org; Paul.Winn@transport.gov.scot; esdal@dumgal.gov.uk; OSDAbnormalLoadsScotland@scotland.pnn.police.uk; abnormalloadrouting@scotlandtranserv.co.uk; abnormalloads@glasgow.gov.uk; m8dbfo.abloads@amey.co.uk; M77DBFOAbnormalLoads@balfourbeatty.com
Subject: [EXTERNAL] Appin Wind Farm ESDAL

Dear All

We have been commissioned to undertake a route review for the proposed Appin Wind Farm, located to the west of Auchenbrack, Thornhill. The proposed Port of Entry is in Glasgow for blade loads and Ayr for towers.

The proposed access route to site is as follows:

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- At Junction 4, loads would join the westbound M74;
- Loads would depart the M74 at Junction 1 and join the M8 westbound before leaving at Junction 22 and join the M77 travelling southbound;
- Loads would continue southbound on the M77 / A77 until Bankfield Roundabout south of Ayr, where they would turn left onto the A713;
- Loads would proceed southbound on the A713 to the south of Carsphairn, where they would turn left onto the B729; and
- Loads would proceed southeast on the B729. At the junction with the Lorg Forest road, loads would turn north and would continue through to the site access junction.

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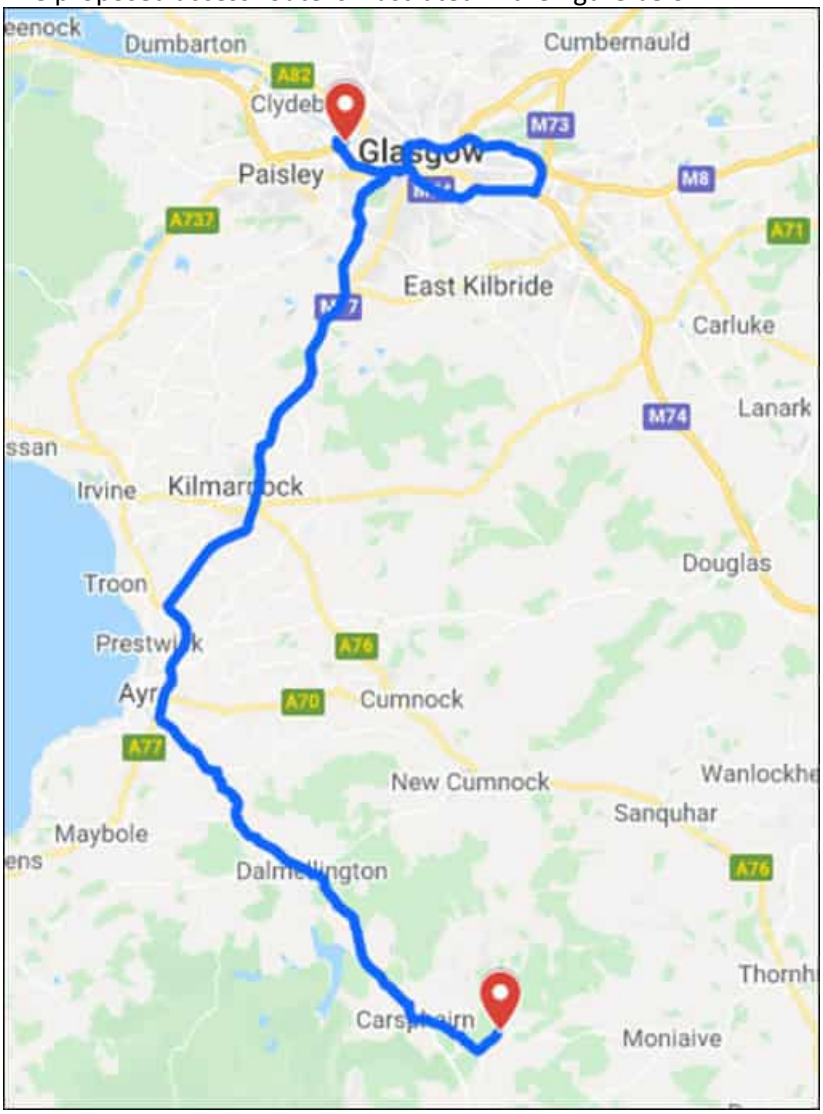

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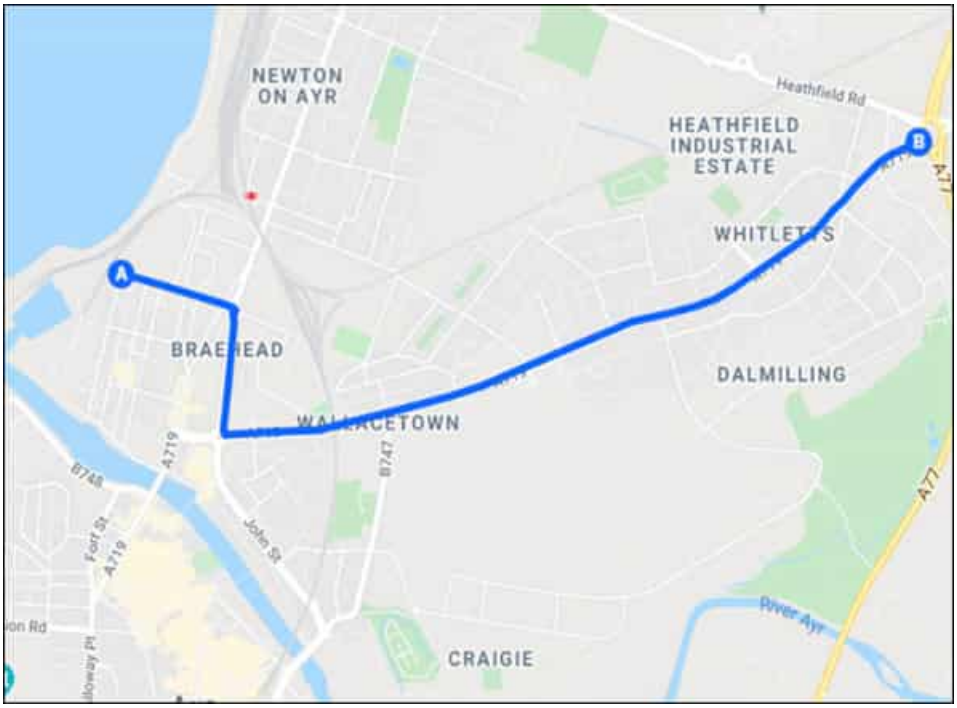

The maximum axle load is 12tonnes, with the gross vehicle weight for the heaviest load expected to be in the region of 130tonnes. The maximum height is 4.9m, with the widest load at 4.8m. The longest loads will have a rigid length of 76m. The assessment is at an early stage at present, however I would be grateful if you could confirm if there are any structures along the route that may present a particular issue. A further, more detailed assessment will be undertaken once the turbine haulier and turbine model have been selected by the developer.

Kind regards,
Jordan

Jordan Stirrat
Assistant Engineer
93 George Street
Edinburgh
EH2 3ES [redacted]
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CORONAVIRUS (COVID 19): In order to protect our colleagues, we have temporarily closed our offices until it is confirmed by the government that it is safe to re-open.
Further information can be found **HERE**.

[redacted]

From: O'Connor, Brian (NRS) <Brian.OConnor@glasgow.gov.uk>
Sent: 28 April 2021 16:30
To: Jordan Stirrat
Cc: Dempsey, Henry (NRS); Ford, James (NRS)
Subject: RE: Appin Wind Farm ESDAL (OFFICIAL)

OFFICIAL

Hi Jordan,

Good news, the proposed route out of KGV is acceptable to Glasgow City Council.

However just to give you a heads up there are currently emergency works on the M8 between Jct 18 and Jct 15 on the Woodside Viaduct and this may be problematic for these moves. Perhaps Amey will get back to soon on this!

Alternatives to consider would be circumnavigating some of the shorter vehicles by utilising the Seward St junction, next to Jct 21 of the M8 and the longer vehicles could circumnavigate at the M74 Jct 2A Fullarton Rd. Just a thought.

Regards.

Brian O'Connor.

From: Jordan Stirrat [mailto:JStirrat@pellfrischmann.com]
Sent: 28 April 2021 15:57
To: abnormalloadscontact@networkrail.co.uk; rsgbrb@jacobs.com; SCAbnormal.Loads@scottishcanals.co.uk; abloads@ayrshireroadsalliance.org; Paul.Winn@transport.gov.scot; esdal@dumgal.gov.uk; OSDAbnormalLoadsScotland@scotland.pnn.police.uk; abnormalloadrouting@scotlandtranserv.co.uk; Abnormal Loads (NS) <AbnormalLoads@glasgow.gov.uk>; m8dbfo.abloads@amey.co.uk; M77DBFOAbnormalLoads@balfourbeatty.com
Subject: Appin Wind Farm ESDAL

Dear All

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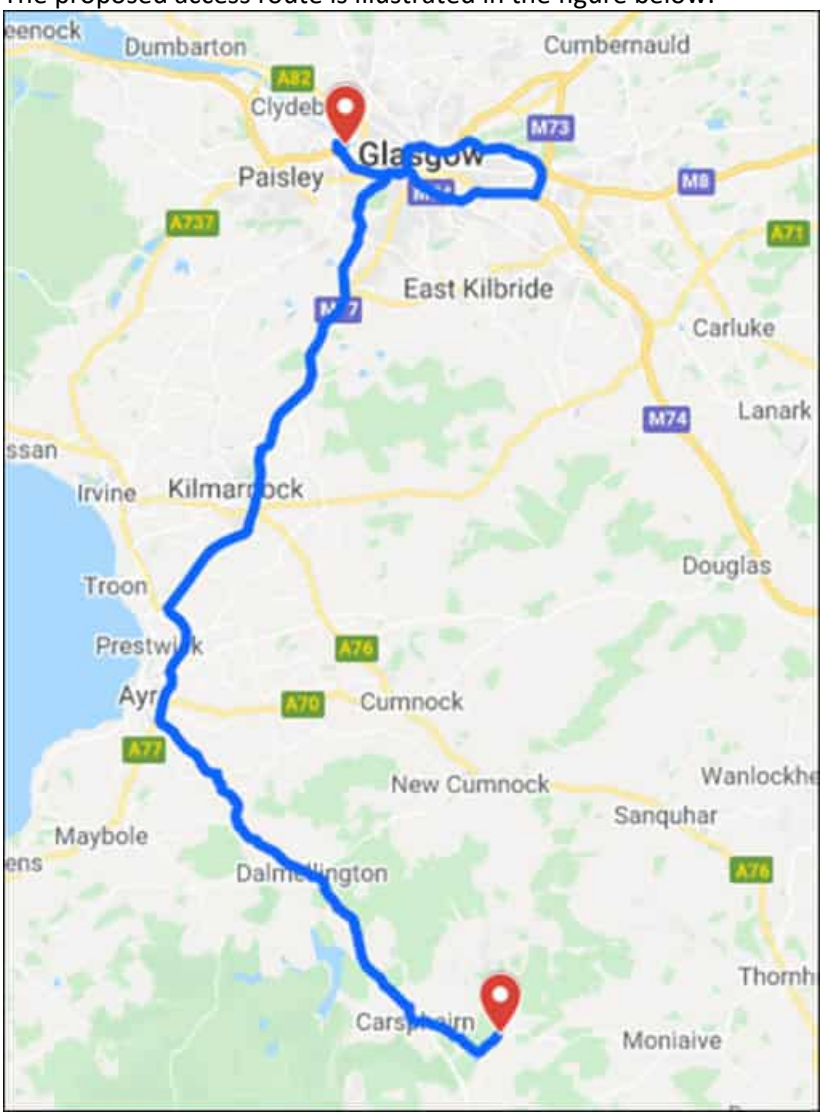

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The maximum axle load is 12tonnes, with the gross vehicle weight for the heaviest load expected to be in the region of 130tonnes. The maximum height is 4.9m, with the widest load at 4.8m. The longest loads will have a rigid length of 76m. The assessment is at an early stage at present, however I would be grateful if you could confirm if there are any structures along the route that may present a particular issue. A further, more detailed assessment will be undertaken once the turbine haulier and turbine model have been selected by the developer.

Kind regards,
Jordan

Jordan Stirrat
Assistant Engineer
93 George Street
Edinburgh
EH2 3ES [redacted]
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Further information can be found **HERE**.

[redacted]

From: Electronic Service Delivery for Abnormal Loads <ESDAL@dumgal.gov.uk>
Sent: 18 July 2021 15:03
To: Jordan Stirrat
Cc: Electronic Service Delivery for Abnormal Loads
Subject: RE: EXTERNAL: Appin Wind Farm ESDAL

OFFICIAL

Good afternoon,

Apologies for the delay in responding to your enquiry.

The proposed route through Dumfries and Galloway (A713, B729 and C35s) has been used to serve other wind farm developments and I would confirm provisionally that it should be suitable for the proposed site.

However, a route survey should be undertaken during the preparation of the traffic management plan and abnormal load route for the site to confirm that the route geometry is suitable for all proposed vehicles.

Regards,

Lauryn

Lauryn Steel | Principal Technician : Structures
Engineering Design | Communities | Dumfries and Galloway Council
[redacted]

OFFICIAL

From: Jordan Stirrat <JStirrat@pellfrischmann.com>
Sent: 28 April 2021 15:57
To: abnormalloadscontact@networkrail.co.uk; rsgbrb@jacobs.com; SCAbnormal.Loads@scottishcanals.co.uk; abloads@ayrshireroadsalliance.org; Paul.Winn@transport.gov.scot; Electronic Service Delivery for Abnormal Loads <ESDAL@dumgal.gov.uk>; OSDAbnormalLoadsScotland@scotland.pnn.police.uk; abnormalloadrouting@scotlandtranserv.co.uk; abnormalloads@glasgow.gov.uk; m8dbfo.abloads@amey.co.uk; M77DBFOAbnormalLoads@balfourbeatty.com
Subject: EXTERNAL: Appin Wind Farm ESDAL

Dear All

We have been commissioned to undertake a route review for the proposed Appin Wind Farm, located to the west of Auchenbrack, Thornhill. The proposed Port of Entry is in Glasgow for blade loads and Ayr for towers.

The proposed access route to site is as follows:

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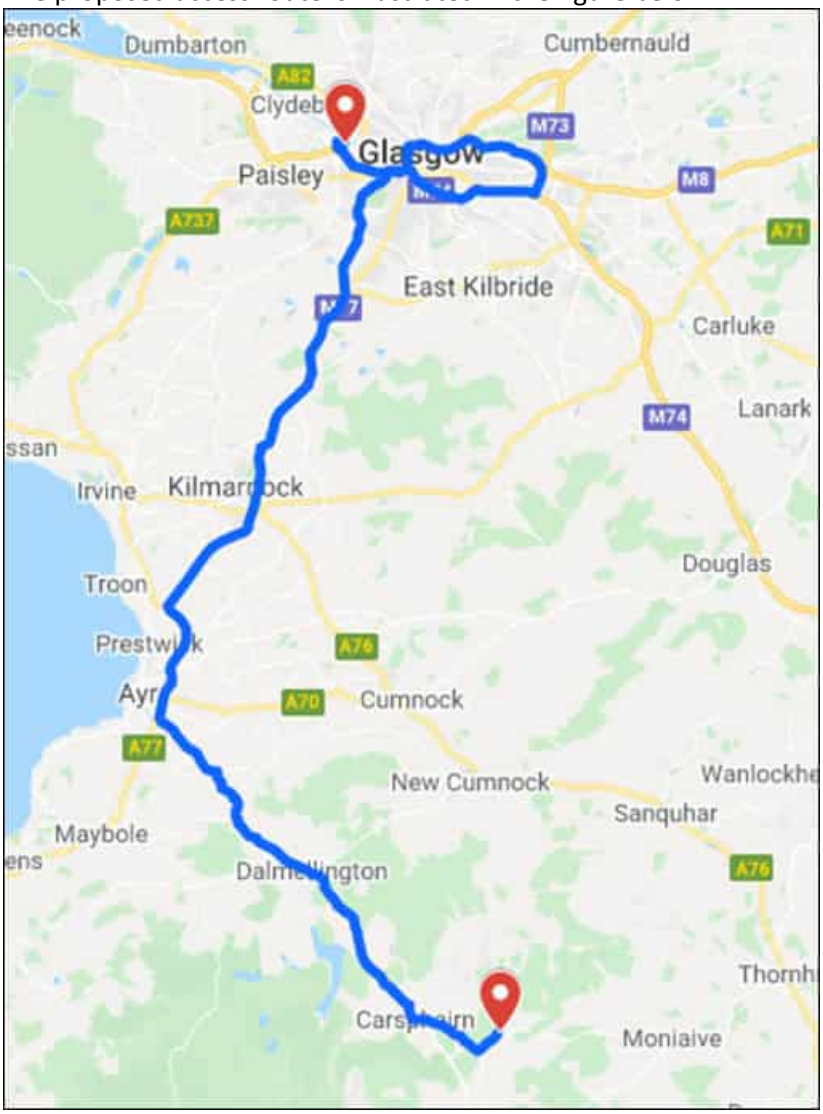

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Jordan

Jordan Stirrat
Assistant Engineer
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Further information can be found **HERE**.

[redacted]

From: McCulloch, John <john.mcculloch@balfourbeatty.com>
Sent: 23 July 2021 15:04
To: Tim Lockett
Subject: Tower Access

In Response to your Email I don't see any problems in our network with this Abnormal Load

Regards

John McCulloch

Roads Inspector | Balfour Beatty | Regional | Scotland

[redacted] | E: john.mcculloch@balfourbeatty.com

M77 Operations Centre, Ayr Road, Newton Mearns, East Renfrewshire, G77 6RT

www.balfourbeatty.com | @balfourbeatty | LinkedIn

Balfour Beatty

Build to Last
Lean. Expert. Trusted. Safe.

We've recently launched our Summer issue of The Expert, the magazine for everyone at Balfour Beatty. Check it out here.

[redacted]

From: McCulloch, John <john.mcculloch@balfourbeatty.com>
Sent: 30 April 2021 14:14
To: Jordan Stirrat
Subject: Appin Windfarm

Just to say that I don't see any problems with this load in our network.

Regards

John McCulloch

Roads Inspector | Balfour Beatty | Regional | Scotland

[redacted] | E: john.mcculloch@balfourbeatty.com

M77 Operations Centre, Ayr Road, Newton Mearns, East Renfrewshire, G77 6RT

www.balfourbeatty.com | @balfourbeatty | LinkedIn

Balfour Beatty

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[redacted]

From: Ierland, Alan <Alan.Ierland@ayrshireroadsalliance.org>
Sent: 30 April 2021 10:23
To: Jordan Stirrat
Cc: Nairn, Douglas; Greig, Scott; Ferguson, Iain; Smith, Kirsty; Walker, Ciaran
Subject: RE: Appin Wind Farm ESDAL [OFFICIAL] [PUBLIC]

CLASSIFICATION: **PUBLIC**

Jordan,

The following response is given on behalf of both South Ayrshire Council (SAC) and East Ayrshire Council (EAC).

SAC - Ayr docks to A77 Whitletts Roundabout for turbine component (towers) abnormal loads

This route has been used for a variety of wind farm abnormal load movements and should present no issues for the axle loads proposed. Swept path analysis may be required for longer length vehicles (blades, towers). There are two underpass structures owned/maintained by SAC and one railway bridge owned/maintained by Network Rail on the route.

A77

The A77 is a trunk road for which responsibility lies with Transport Scotland and their operating company Amey.

A713
Both SAC and EAC have responsibility for sections of the A713 within the proposed route.

SAC section of A713
The section of A713 within South Ayrshire from the A77/A713 Bankfield roundabout to the SAC/EAC Boundary at OS 237434 617249 cross only minor culverts and should present no issues for the abnormal loads associated with the wind farm coming from Port of Ayr and KGV Glasgow.

EAC section of A713
On the section of A713 within East Ayrshire from the SAC/EAC Boundary to the EAC/DGC boundary there are some 28 structures (bridges, culverts, retaining walls)

The route is currently not suitable for the loads proposed but following strengthening works being undertaken by the South Kyle Wind Farm (SKWF) developer all bridges and culverts on the A713 between the SAC/EAC boundary and the EAC/DGC boundary **are likely** to be satisfactory for the abnormal loads proposed. However, structural load assessments would still require to be carried out by the applicant to verify the suitability of all of these structures for the proposed abnormal load configurations.

A713/30 Boneston Bridge at OS 238606, 616244 (Approximately 4.5km from the A713/A77 junction) was recently strengthened by the South Kyle Wind Farm developer to accommodate their respective abnormal load vehicles.

A further bridge has been identified as requiring strengthening for the SKWF and a design is currently being considered by them in consultation with ARA.

Other structures on the route are also currently being assessed by SKWF's consultant and further issues may yet be highlighted.

ARA would respectfully request that the Appin WF developer liaise with the SKWF developer and seek to come to some arrangement whereby their abnormal load requirements can also be taken into account in the bridge assessments and strengthenings being undertaken on behalf of the SKWF developer.

Rail bridges owned by Network Rail
Two of the rail bridges on the EAC section of the A713 are owned and maintained by Network Rail and they should be consulted to confirm their suitability for the abnormal loads proposed. These are;

A713/50, Rail Bridge No 212/12 [Holehouse]
A713/70, Rail Bridge No. 212/18 [Downieston, Patna]

EAC/DGC Boundary Bridge
A713/130/C100, Polnaskie Bridge is a boundary bridge owned jointly between East Ayrshire Council and Dumfries and Galloway Council. DGC are the lead authority in respect of the management of the bridge and contact should be made with them in respect of the bridges suitability to carry the proposed abnormal loads.

A713 road alignment
There are a number of tight bends along the route which may prove problematic. The horizontal alignment passing over A713/100 Buchans Bridge, north of Dalmellington and A713/120 Kirn Bridge south of Dalmellington may also prove difficult. Swept path analysis/trial runs should be carried out to demonstrate suitability. The developer for the South Kyle Wind Farm is proposing localised widening of the route at specific pinch points to satisfy over run / over sail issues relevant to the transport of wind turbine components associated with their wind farm development. As mentioned above, the Appin developer should liaise with the SKWF developer to ensure that the road adjustments being proposed would also meet their requirements.

Crane abnormal loads – I would ask that you remind your client that the cranes and associated ballast vehicles (abnormal loads) required to deal with the wind turbine components on site may potentially be more critical for a route than the actual turbine component abnormal loads and require to be given due consideration at an early stage.

Summary
All bridges and culverts on the proposed routes will have to be considered in relation to the specific abnormal load configurations proposed for the wind farm. This should also include for any mobile cranes and crane ballast vehicles which fall within the abnormal load regulations. Such cranes often have more onerous axle load configurations than the abnormal load vehicles delivering the wind turbine components.

Inspections will require to be undertaken by the applicant of the roads and all known structures, culverts and drains below the affected public road to confirm their ability to carry abnormal loads and construction traffic and to determine all necessary repairs prior to any works commencing.

It is likely that, some, if not all of the structures will require a structural load assessment with respect to the proposed load configurations. These load assessments would require to be carried out by the applicant, at their expense, to the satisfaction of the Roads Design Manager. As mentioned above, the SKWF developer is currently undertaking such work and it would make sense for the Appin WF requirements to be taken into account at the same time.

Any strengthening/replacement works necessary as a result of these assessments or repairs required to ensure the integrity of the road or structure prior to any abnormal load movement will require to be funded directly by the applicant. In addition any damage due to the applicant's abnormal loads will require to be repaired at the applicant's expense.

Swept path analysis will be required to demonstrate suitability of the route alignment for the proposed vehicles.

EAC will require the developer to enter into a Roads (Scotland) Act 1984, Section 96 agreement with financial bond in respect of the abnormal load movements.

Contact should be made with Ayrshire Roads Alliance Design Section based at the Opera House, Kilmarnock (tel. 01563 503164) regarding the suitability of any existing structures for proposed abnormal loads well in advance of any proposed load movements.

I trust the above is of assistance but would stress that until all of the above has been undertaken, ARA will not approve the passage of any Appin WF abnormal load vehicles travelling south on the A713. I would be grateful if you would forward this email response to the developer.

Regards,

Alan Ierland, BSc Hons, CENG, MICE
Design & Environment Team Manager – Ayrshire Roads Alliance
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[redacted]
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From: Jordan Stirrat <JStirrat@pellfrischmann.com>
Sent: 28 April 2021 15:56
To: abnormalloadscontact@networkrail.co.uk; rsgbrb@jacobs.com; SCAbnormal.Loads@scottishcanals.co.uk; ARA.AbnormalLoad; Paul.Winn@transport.gov.scot; esdal@dumgal.gov.uk; OSDAbnormalLoadsScotland@scotland.pnn.police.uk; abnormalloadrouting@scotlandtranserv.co.uk; abnormalloads@glasgow.gov.uk; m8dbfo.abloads@amey.co.uk; M77DBFOAbnormalLoads@balfourbeatty.com
Subject: Appin Wind Farm ESDAL

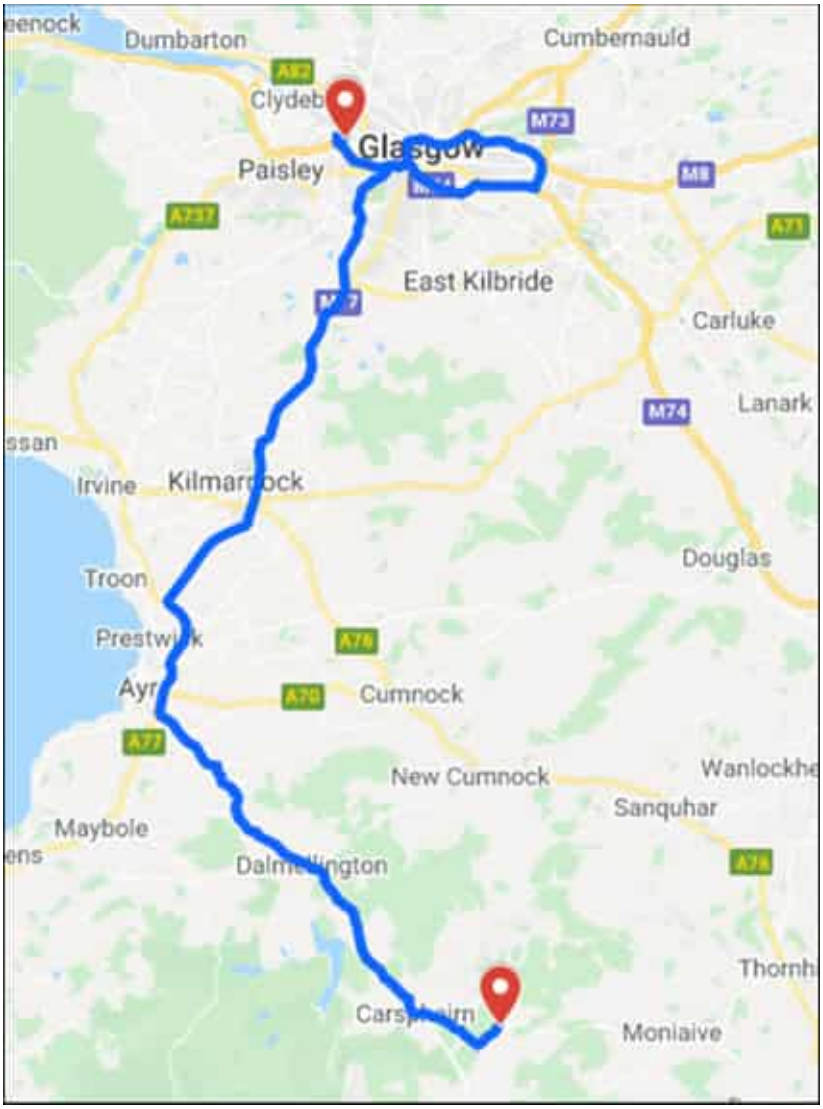
Dear All

We have been commissioned to undertake a route review for the proposed Appin Wind Farm, located to the west of Auchenbrack, Thornhill. The proposed Port of Entry is in Glasgow for blade loads and Ayr for towers.

The proposed access route to site is as follows:

- Loads would depart KGV Dock and travel west on Kings Inch Drive before turning left onto Mayo Avenue;
- Loads would join the eastbound M8 and continue to Junction 8;
- Loads would leave the M8 and join the M73 travelling south;
- At Junction 4, loads would join the westbound M74;
- Loads would depart the M74 at Junction 1 and join the M8 westbound before leaving at Junction 22 and join the M77 travelling southbound;
- Loads would continue southbound on the M77 / A77 until Bankfield Roundabout south of Ayr, where they would turn left onto the A713;
- Loads would proceed southbound on the A713 to the south of Carsphairn, where they would turn left onto the B729; and
- Loads would proceed southeast on the B729. At the junction with the Lorg Forest road, loads would turn north and would continue through to the site access junction.

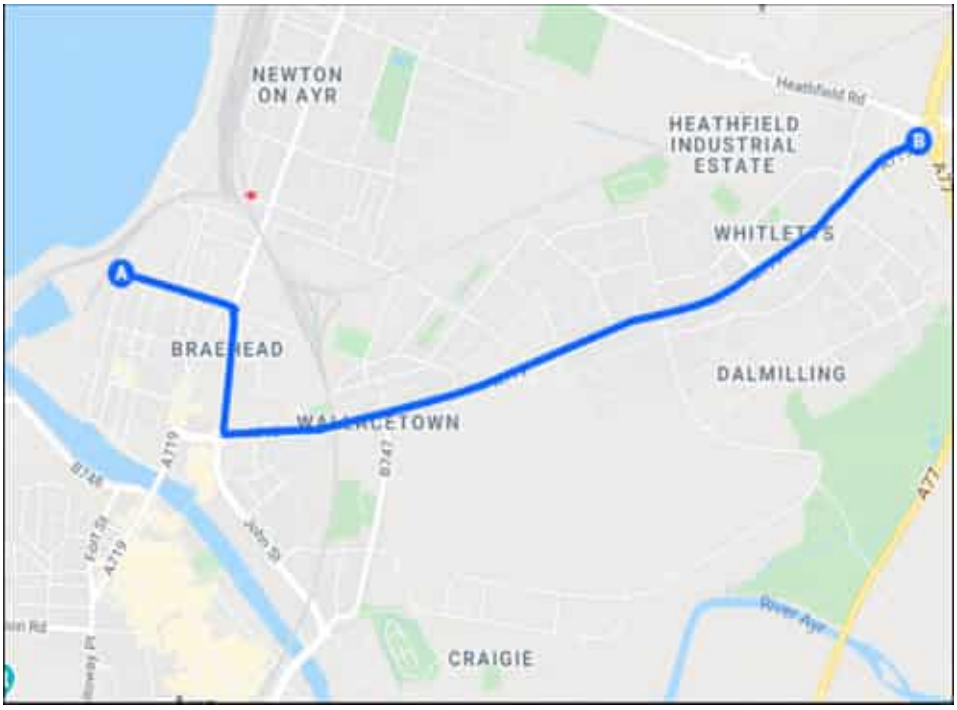
The proposed access route is illustrated in the figure below:



The proposed tower access route is as follows:

- Loads would depart the Port of Ayr and continue east on Waggon Road;
- Loads would turn right onto Allison Street and then left onto Whitletts Road; and
- Loads would continue east on Whitletts Road to Whitletts Roundabout where they would turn right onto the A77 and join the main route.

The proposed tower route is illustrated in the figure below:



The maximum axle load is 12tonnes, with the gross vehicle weight for the heaviest load expected to be in the region of 130tonnes. The maximum height is 4.9m, with the widest load at 4.8m. The longest loads will have a rigid length of 76m. The assessment is at an early stage at present, however I would be grateful if you could confirm if there are any structures along the route that may present a particular issue. A further, more detailed assessment will be undertaken once the turbine haulier and turbine model have been selected by the developer.

Kind regards,
Jordan

Jordan Stirrat
Assistant Engineer
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Edinburgh
EH2 3ES [redacted]
Pell Frischmann
Excellence through innovation
http://www.pellfrischmann.com
CORONAVIRUS (COVID 19): In order to protect our colleagues, we have temporarily closed our offices until it is confirmed by the government that it is safe to re-open.
Further information can be found **HERE**.